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THE AMERICAN ELEVATOR AND GRAIN TRADE

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Mitchell Brothers Publishing Co.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

One Dollar Per Annum
SINGLE COPIES, 15 CENTS

VOL. XXXIX.

431 South Dearborn Street, Chicago, Ill., July 15, 1920

NO. 1

WE ARE PROGRESSIVE ENOUGH
TO BE AGGRESSIVE FOR YOU

McKENNA & DICKEY
Grain

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TAYLOR & BOURNIQUE CO.

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MILWAUKEE, WISCONSIN

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Running 20 Years— *still in good condition*

TWENTY years ago the Omaha Elevator Company equipped their plant with Diamond Grain Belts.

Today, *four* conveyor belts, 303 feet 36 inch, 4 ply, are still running and are in good condition.

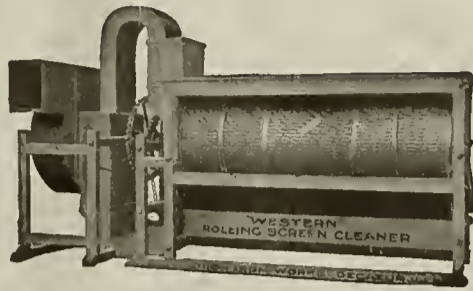
“Grainvey” and “Elevay” are the two Diamond Belts for your elevator. Write for full information and prices.

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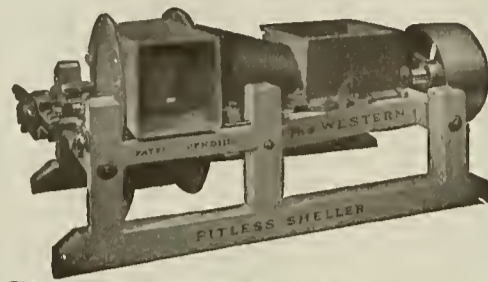
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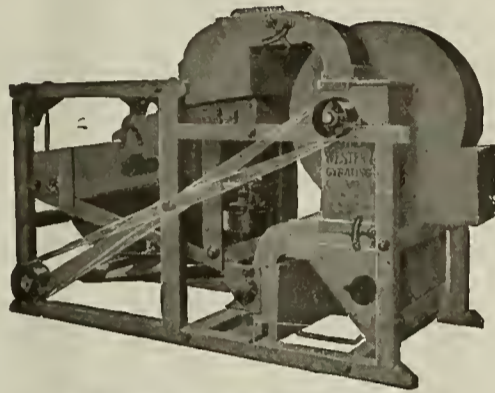




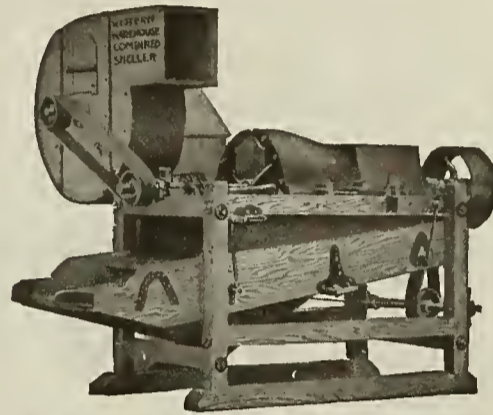
"Western" Rolling Screen Corn Cleaner



"Western" Pitless Sheller



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Will You Profit By The Experience of Others?

If you will travel throughout the grain growing sections of this country you will meet with countless grain elevators and find that the majority of them are "doing a thriving, profitable business." Penetrate the interior of these structures and you will also find that the best houses are operating with the WESTERN LINE of machinery. Operators say that this line promotes efficiency, economy, and is no small factor in the general success of the plant.

"THE WESTERN LINE"

is for both large and small grain elevators. For almost half a century it has been the experience of the elevator owner that no machinery troubles can enter the plant where the Western Line is installed. We invite you to profit by this experience and advise us of your requirements. We can make prompt shipment.

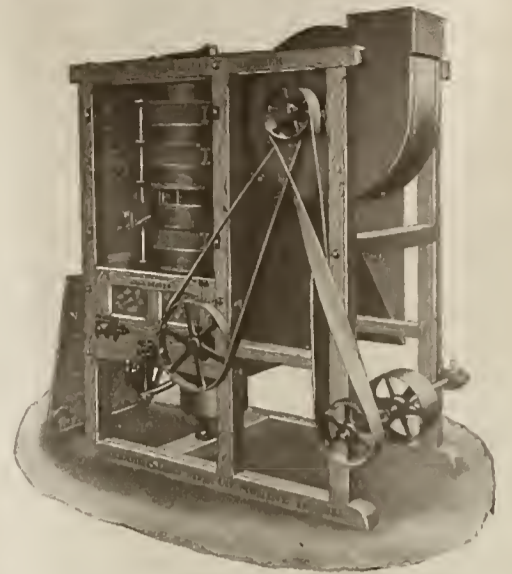
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A Grain Cleaner
For Every Mill
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Barnard-Moline Grain Cleaners

Durable, Dependable, Economical and Efficient

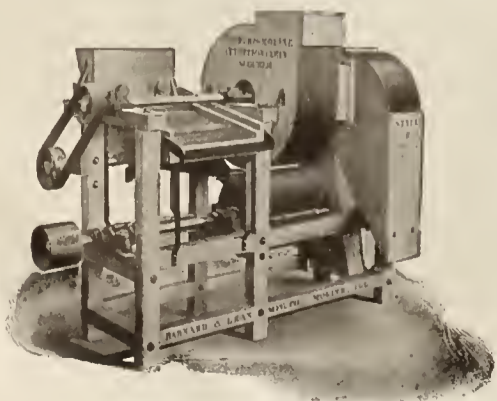
It was in 1860 that we designed and pioneered the first successful grain cleaner, and we have been building grain cleaners ever since, until we are now the largest manufacturers in the world. We manufacture 145 different styles and sizes of grain cleaners for cleaning wheat, corn, oats, barley and numerous other seeds.

Most every mill and grain elevator throughout the country is equipped with one or more Barnard-Moline grain cleaners; if there are none in your mill or elevator, it is either an exception or because you have never investigated the many valuable features incorporated in the Barnard-Moline line.

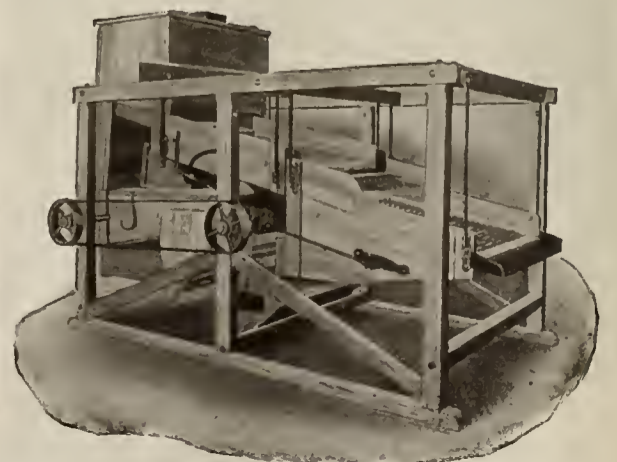
At top of page on the left is shown a Barnard's Perfected Elevator Separator, equipped with our patent Sieve Cleaning Device, which automatically keeps the sieves clean and free from clogging. The Barnard-Moline Controllable Scourer shown at top of page on the right is the only form of scourer made that enables you to absolutely control the degree of scouring all grades of grain as hard as nature will permit. Every machine we manufacture possesses one or more valuable features that are worthy of your consideration, before buying a cleaner elsewhere.



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MILL FURNISHERS
ESTABLISHED 1860. MOLINE, ILLINOIS, U.S.A.



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LOOK for a big demand on Sucrene Feeds for summer feeding. Sucrene Dairy Food for cows on pasture, Sucrene Hog Meal and Poultry Feeds for growing pigs and poultry, have an established reputation for profitable returns.

Right now we are giving Sucrene dealers a tremendous advertising boost. Page and double-page announcements on spring and summer feeding of Sucrene, are going to stock feeders, dairymen and poultry raisers in your locality—arousing old friends and creating new prospects for immediate business.

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Third.—As the terminal points for 200,000 miles of railways it is a convenient shipping point for the country dealer, and local buyers are enabled to distribute all products quickly and to best advantage.

Fourth.—The market embraces in its membership young, energetic, and capable grain merchants, who are at all times working indefatigably for the interest of their patrons.

Ship your grain and hay to any of the following representative and responsible grain merchants, all members of the

Cincinnati Grain & Hay Exchange

A. BENDER, Flour, Grain and Feeds
BINGHAM-SCHOLL GRAIN CO., Grain Exclusively
BROUSE-SKIDMORE GRAIN CO., Grain, Hay, Feed
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EARLY & DANIEL CO., Hay, Grain, Feed
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Weller

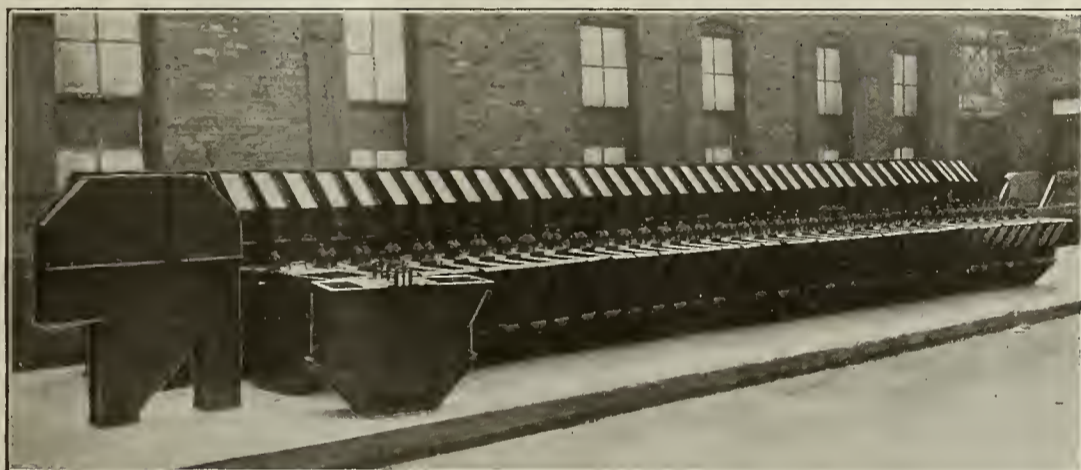
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FOR THE ELEVATOR

Elevating, Conveying and Power Transmitting Machinery



Equipment
Will Give You
The Service
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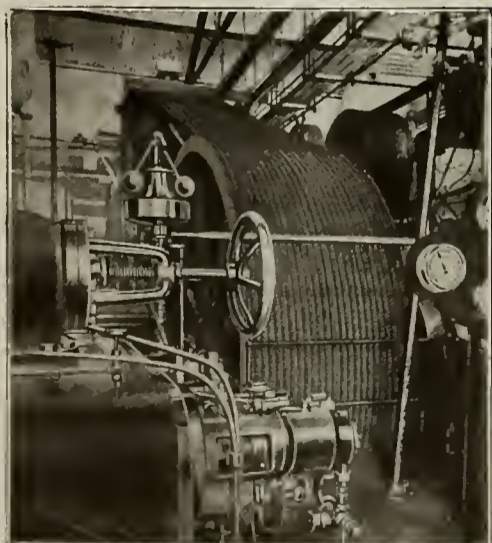


FOR OVER THIRTY YEARS

The Weller Manufacturing Company have specialized in the design and manufacture of modern equipment—the better kind—for the mill and elevator.

Weller made equipment will be found doing duty in most of the large and a great many of the small elevators, giving satisfactory service for years at a minimum expense for operation and upkeep.

It is a matter of pride with us that customers who have put Weller made equipment to the test, when enlarging or building additions to their plants specify for our goods.



WE DESIGN AND MANUFACTURE

Belt Conveyors, Spiral Conveyors, Drag Conveyors, Bucket Elevators, Elevator Buckets, Elevator Casings, Elevator Boots, Elevator Heads, Elevator Distributing Spouts, Gray Automatic Shutoff for Elevator, Grain Driers, Car Loaders, Car Unloaders, Car Pullers, Power Shovels, One Man Elevators, Rope Drives, Auto Truck and Wagon Dumps, Pulleys, Shafting, Hangers, Bearings, Friction Clutches, etc.

Weller Made Steel Bushed Conveyor Chain



This stamp on
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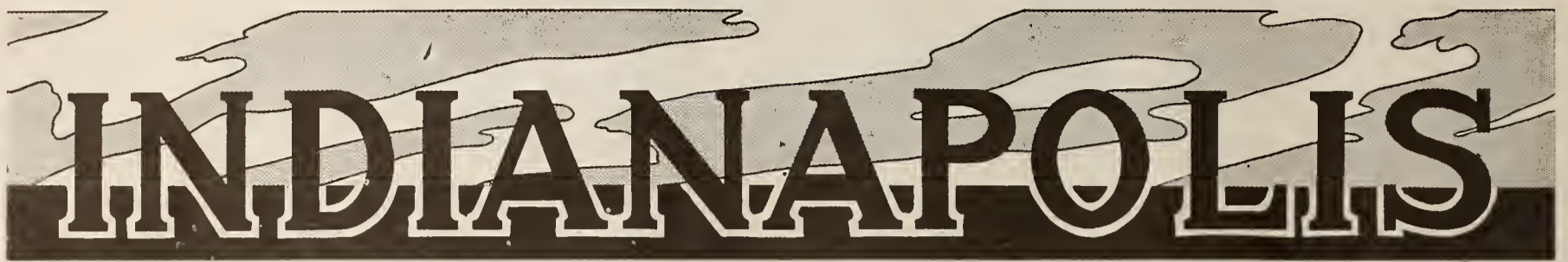


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A Chain to meet your requirements. Write us.

Our No. 30F Catalogue Should Be in the Files of Every Mill
and Elevator. Send for Your Copy.

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New York Boston Baltimore Cleveland Pittsburgh Salt Lake City



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The Many Advantages Offered By the Central Grain Market

Indianapolis is known as the largest inland railroad city in the country and is the natural destination for shipments of grain from Indiana, Illinois, Ohio, Michigan, Wisconsin and states adjoining.

Its geographical location together with its railroads radiating to all sections of the country, makes it a logical outlet and distributing point to the East, South and Southeast.

These splendid railroad facilities assure quick handling of shipments with prompt returns on same.

Indianapolis also takes a natural pride in having the largest corn mills in the country which, together with its flour mills and vast array of manufacturing industries, creates an exceedingly large local consumption of wheat, corn, oats, rye and hay annually.

This local and foreign demand makes for top prices on all shipments.

This, together with its adequate weighing facilities, its efficient inspection department, and increased elevator storage and drying equipment makes Indianapolis more and more important each season as a market for shippers and buyers of grain, hay and feeds.

Route your grain and hay to any of the following firms, all devoted to your interests and all members of the

INDIANAPOLIS BOARD OF TRADE

BIG FOUR ELEVATOR CO., Merchandisers of Grain
BINGHAM-HEWETT-SCHOLL CO., Grain Merchants
BELT ELEVATOR & FEED CO., Receivers, Shippers
BERT A. BOYD GRAIN CO., Grain Commission
CLEVELAND GRAIN CO., Grain Commission
WM. R. EVANS GRAIN CO., Brokers and Commission
P. M. GALE GRAIN CO., Grain, Feed
GOLDBERG GRAIN COMPANY, Consignments
HEINMILLER GRAIN CO., Receivers and Shippers
HAYWARD-RICH GRAIN CO., Commission, Brokerage
LEW HILL GRAIN CO., Strictly Commission
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KENDRICK & SLOAN CO., Hay and Grain
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McCARDLE-BLACK CO., Grain Merchants
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**SPRING
PASTURE
IS ALL
RIGHT
BUT—**

The United States Government Bulletin No. 743 says:

"The bulky nature of pasture grass places a positive limit upon the capacity of the cow to take feed. In other words, the cow's stomach cannot hold grass enough to supply the required nutrients for maximum milk production, therefore a part of her ration should be of a more concentrated nature."

That's why your customers should continue to feed

SCHUMACHER FEED AND BIG "Q" DAIRY RATION

right through the pasture season, because these two feeds best supply the concentrated nutrients for bodily maintenance of health conditions—both of which are necessary for maximum milk production.

Most farmers and dairymen realize the importance of feeding a concentrated grain ration even when their cows are supplied with abundant pasture, so don't let up on your Schumacher and Big "Q" sales. Push them just as hard now as at any season of the year. Tell your customers how these two feeds supply the needed qualities that pasture alone lacks.

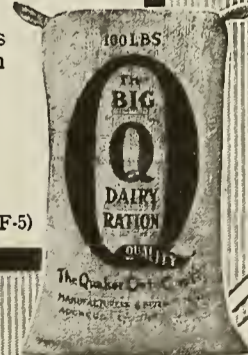
Call their attention to the fact, too, that Schumacher Feed is an ideal feed for all farm stock. It is a wonderful growing feed for young hogs—splendid for horses—and all growing animals.

If you are not handling these two fast selling feeds now, write for our dealer's proposition. Let us show you how you can get the bulk of the feed business in your locality.

The Quaker Oats Company

Address Chicago, U. S. A.

(F-5)



An Elevator Engineering Problem Successfully Solved

Fastest Operating Elevator in the World Uses Morse Chain Drive as Solution of all Transmission Problems—Conforms to Details of Perfect Equipment Throughout the House



THE NEW NORTHERN CENTRAL CANTON ELEVATOR, BALTIMORE, MD.

HERO, a Greek who lived many years before the Christian Era, invented the steam turbine. He made it for a toy to amuse a small boy. For eighteen centuries the principle that Hero discovered lay dormant and useless because the method of transmitting the power engendered was not known. Power without proper transmission is as futile as the waves of the sea beating on a rocky coast, or lightning dissipating its energy in the clouds. To carry power from its point of initiation to its application in useful work is the groundwork of all mechanical engineering science. Last February the new 5,000,000-bushel Northern Central Elevator (Pennsylvania Railroad) at Canton, Baltimore, Md., received its first carload of grain. Since that opening day, over 2,000 cars have been unloaded, cleaned, dried, stored or loaded out for export, as the case may be, all without a single hitch, without complaint, and without loss. To accomplish this result involved a nice problem in power transmission which was solved to the satisfaction of all concerned.

There are 74 Morse Silent Chain Drives in the plant, totaling 2,270 horsepower, ranging in size from 15 to 60 horsepower, motors running from 130 revolutions per minute up to 730 revolutions. They are employed for almost every conceivable purpose: there are seven driving receiving conveyors, 10 on cross shipping conveyors, 22 drive storage conveyors, two each on basement and cupola conveyors, 14 on shipping conveyors, seven in the gantries, one drives the power shovels from countershaft, one is on the drier conveyor and eight on the drier fans.

The employment of Morse Chain Drives on a house of this kind is significant. The designers and builders of the plant, James Stewart & Co., Inc., of Chicago, went out to make a record for the plant and they succeeded. No elevator has had so many new and original devices, and we believe that no elevator has ever been more carefully planned to effect every possible saving in labor, power and time, and to eliminate waste, costly mistakes and loss.

The Pennsylvania Railroad, for whom it was erected, and the builders, made the first cost of the plant a minor consideration. The years of its service must prove the design and equipment economical. That was the ruling thought

in every step of the plan; whatever was used in the structure must deliver the goods.

It was not by chance that Morse Chain Drives were selected as the sole transmission for all motors which were not direct connected. Every known transmission was thoroughly canvassed before de-



ONE OF THE MORSE INSTALLATIONS

cision was made and Morse equipment was ordered because it was believed that it would conform to the high efficiency standard better than any other. In a house of this character, where every unit of the equipment is keyed to match the other there can be no stoppage or delay in any part or the efficiency of the whole would be threatened. Absolute reliability, so far as mechanical ingenuity can guarantee reliability, was a factor given consideration. All elevators, all conveyors, all spouts are timed to deliver about 20,000 bushels per hour and there must be no lame transmission anywhere to wreck this perfect co-ordination.

This principle of co-ordination, together with the automatic car unloaders, elevator head machinery, automatic conveyor belt tighteners, telautograph system, and numerous other devices which, for the first time, have been installed in a grain elevator, have brought engineers from all parts of the country to inspect the house and watch its operation. The verdict of these engineers, many of whom came in a most critical spirit, is unanimously in praise of its equipment.

Naturally the Stewart-Link Belt Car Unloader attracts much attention, for it is a mammoth piece of mechanism which handles a loaded car, tipping it 30 degrees sidewise and 45 degrees endwise, as easily as you might handle a pigs-in-clover puzzle. The unloader spots a car, unloads and cleans it, and gets it away in from seven to ten minutes, and is a wonderful thing to see operate without any injury whatever to the car or contents. But of scarcely less interest is the unit system of grain movement through the house. The time which this system saves is hard to estimate, but is very great, and of course its efficiency depends entirely upon the reliability of the transmission of power which operates it.

The plan of the house provides for ample substitution in the course of grain flow should an untoward accident occur in any unit. But these provisions are for emergency only; and with the equipment chosen are not expected to be needed.

Reliability, however, valuable as it is in all mechanical contrivances, is not the sole factor that was considered. The operating cost must be considered, that is, its efficiency. Only after the most exhaustive examination of tests were the engineers of the Stewart organization willing to endorse any transmission system. But Morse Chains have proved that efficiency under such a variety of conditions and in so many different ways that the choice ultimately came to them by the natural process of elimination.

Since power was turned on and the first car of grain unloaded by the wonderful contrivance which in this elevator is being given its baptismal trial,

the Morse Silent Chains have driven every unit, steadily, silently, and to the complete satisfaction of the operators of the house. They have delivered the goods.

—Advertisement.

MORSE CHAIN CO.

ITHACA, N. Y.

Engineering Service Offices in all Principal Cities



Preston Lansing

Tile Silos and Grain Bins

Vitrified Tile Is Ideal for Grain Storage

With a Preston-Lansing Grain Bin you can be sure of protecting your grain.

Losses from vermin and molding are eliminated as Preston Lansing Bins are moisture-proof and vermin-proof. Vitrified Tile cannot burn—your insurance premiums are cut to a minimum.

The Construction That Defies Time

Each block is made to brace against the blocks next to it in "ship-lap" formation. Deep grooves at top and bottom allow for a complete "circle" of cement re-enforced with a twisted steel rod between each tier of blocks. These bands of steel give strength to withstand any grain pressure. State University tests show that Preston Lansing Blocks can withstand a pressure of 95,000 pounds even without re-enforcement. Tests to determine the amount of water absorption show less than 4% after boiling the blocks for five hours.

Figured on a basis of yearly service Preston Lansing Bins cost less than any other. They have no upkeep cost—no repairs, no painting, no shrinkage. And in appearance they are second to none.

Write for catalog and prices.

J. M. PRESTON CO.

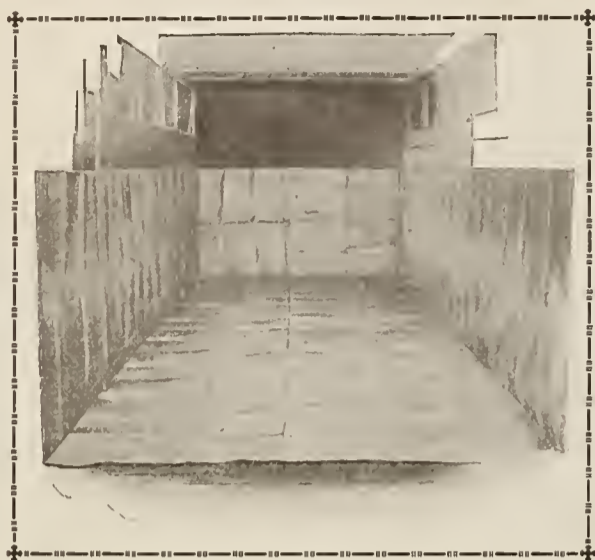
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Lansing, Mich.

Factories at New Brighton, Pa., Uhrichsville, Ohio, Brazil, Ind., and Fort Dodge, Ia.



Fireproof—Waterproof—Everlasting



KENNEDY CAR LINERS

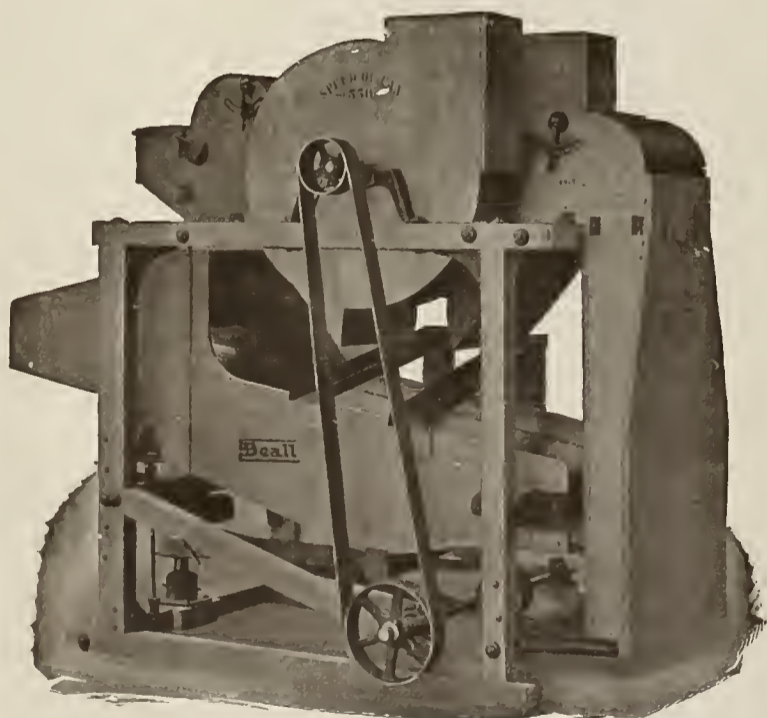
The only device offered the grain shipper which makes his car absolutely leak-proof.

They prevent shortage disputes and make a remarkable saving of money

Thousands of progressive shippers are using them today.

Order from the manufacturer.

THE KENNEDY CAR LINER & BAG COMPANY
SHELBYVILLE, IND.



Built in ten sizes

Send for Illustrated Catalog

Beall
THE MARK OF QUALITY

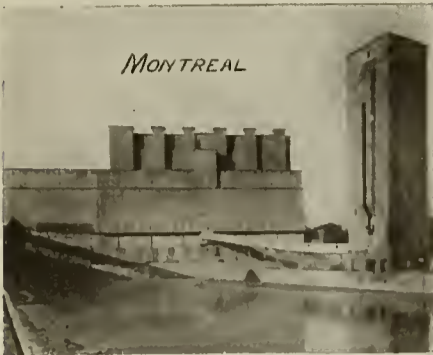
A Time for Everything

Now that both parties have selected their candidates and the country is going to be saved by one or the other, we can get down to our regular business.

Isn't it time for that Beall Separator?

The Beall has been the leader for years in superior quality in WAREHOUSE AND ELEVATOR SEPARATORS.

THE BEALL IMPROVEMENTS CO., Inc.
Decatur - - - - - Illinois



MONTREAL

John S. Metcalf Co.

Grain Elevator Engineers



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ENGLAND



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Locust Street Viaduct COMPLETE Bloomington, Ill.

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Monadnock Block CHICAGO, ILL.
All classes of Steel and Iron Work designed, delivered and erected complete.

We furnished the steel and iron work for the following recently constructed grain elevators and mills: C. & N. W. Ry. Elevator, Council Bluffs; Kentucky Public Elevator, Louisville; American Milling Co., Peoria; Municipal Grain Elevator, Portland, Ore.; Rosenbaum Bros.' Feed Mills, Chicago, etc.

L. A. STINSON

CONSULTING ENGINEER

H. E. GODFREY, Civil Engineer
ELEVATORS, MILLS AND WAREHOUSES
COMPLETE
National Life Building Chicago, Ill.
Grain Driers, General Overhauling and Improvements

Grain
Elevators
Feed
Mills



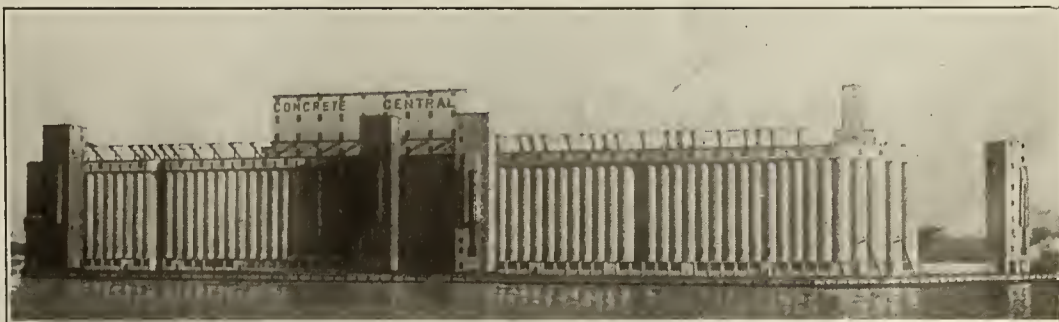
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COMPANY
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REGISTERED STRUCTURAL ENGINEERS
MORE THAN 20 YEARS EXPERIENCE

MONARCH

Built Elevators
Assure You
Economical Design
First Class Work
Efficient Operation
and
Satisfaction
Let Us Submit
Designs and Prices

One of the Modern Houses Which Has Made a Record
for Rapid and Economical Handling
CONCRETE CENTRAL, BUFFALO, 4,500,000 Bu.



MONARCH ENGINEERING CO. - - - BUFFALO, N. Y.



400,000 BUSHEL ELEVATOR

FOR

Postum Cereal Co.

Battle Creek, Mich.

MAKERS OF

POST TOASTIES, POSTUM CEREAL
AND GRAPENUTS

"There's A Reason"

Macdonald Engineering Company

53 W. Jackson Boulevard, Chicago

PETERBORO ONT. PLANT THE QUAKER OATS COMPANY

DESIGNED AND BUILT BY
CANADIAN LEONARD CONSTRUCTION CO., LTD.

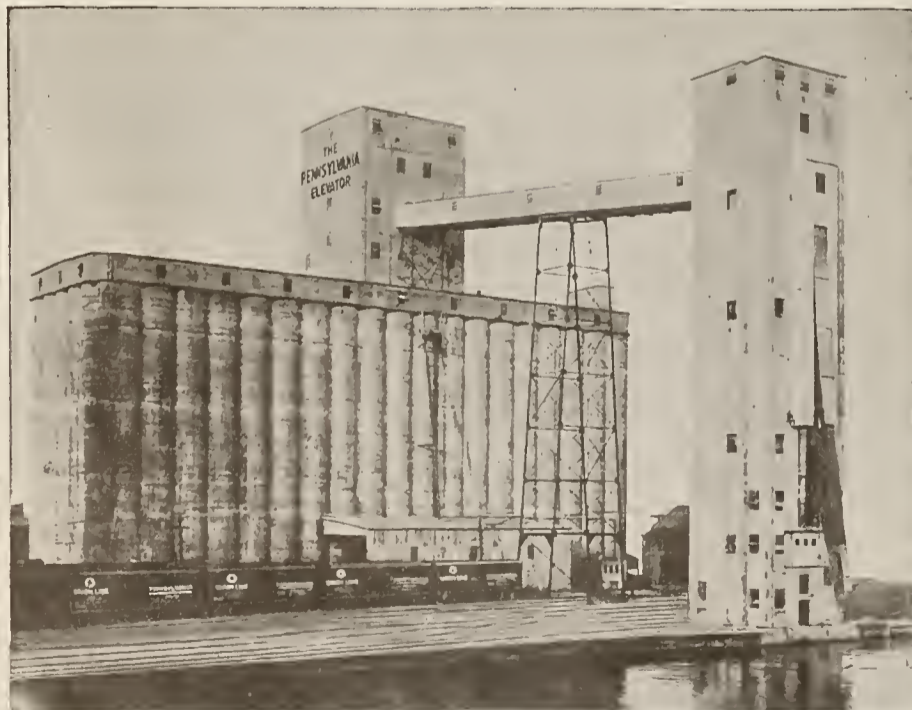
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ENGINEERS and CONSTRUCTORS

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NEW YORK*We Invite Your Inquiries*

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1,250,000-bushel Concrete Workinghouse and 25,000-bushel Marine
Tower. Reinforced Concrete. Latest improvements. Write us for
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THE POLK SYSTEM

All-steel machines for all kinds of

CIRCULAR CONCRETE CONSTRUCTION

We contract grain storages, water
towers and coal pockets.

Polk-Genung-Polk Company

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Indiana

Burrell Engineering and Construction Co.

CHICAGO

Established 1897—Incorporated 1902

Continuously under the management of

George T. Burrell, President

DESIGNERS AND BUILDERS

Grain Elevators, Flour Mills, and Related Buildings

In doing our best, completely and satisfactorily to handle
work in this field of construction we have sought to establish
the fact that

No job is too small to merit our careful attention and none so large as to tax our capabilities.

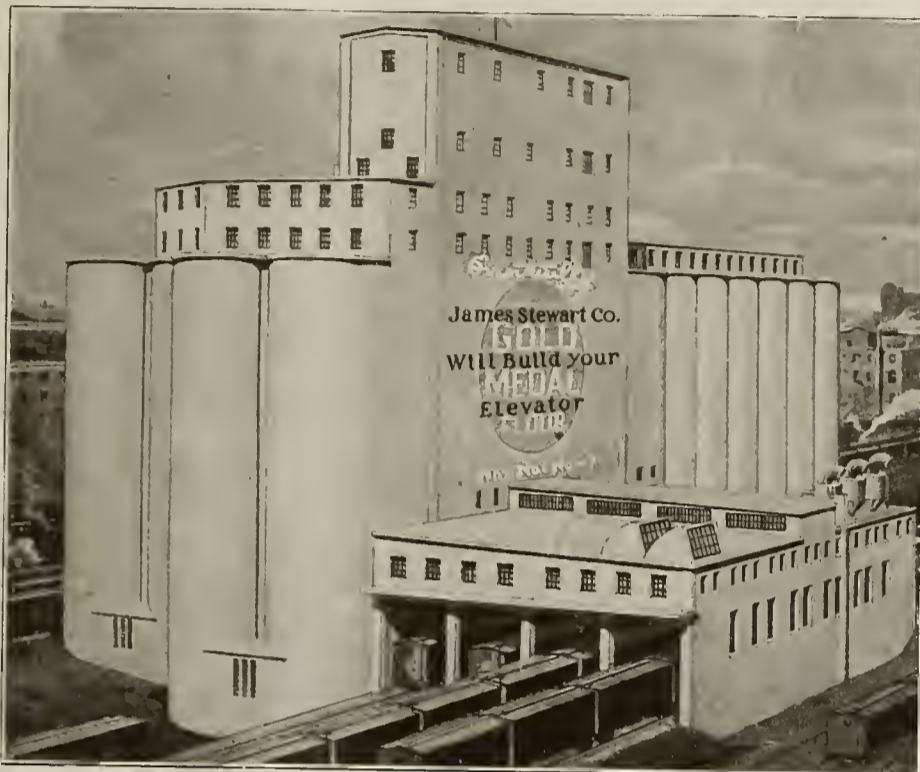
1102-10 Webster Building
Chicago, Illinois404 Scarritt Arcade
Kansas City, Missouri

**TWO MILLION BUSHEL FIRE PROOF
RECEIVING ELEVATOR**

FOR

Washburn-Crosby Company

Minneapolis, Minn.



"We have built for many of your friends.
Eventually we will build for you. Why not now?"

We Design and Build Elevators, any type of Construction, in any part of the World.

JAMES STEWART & CO., Inc.

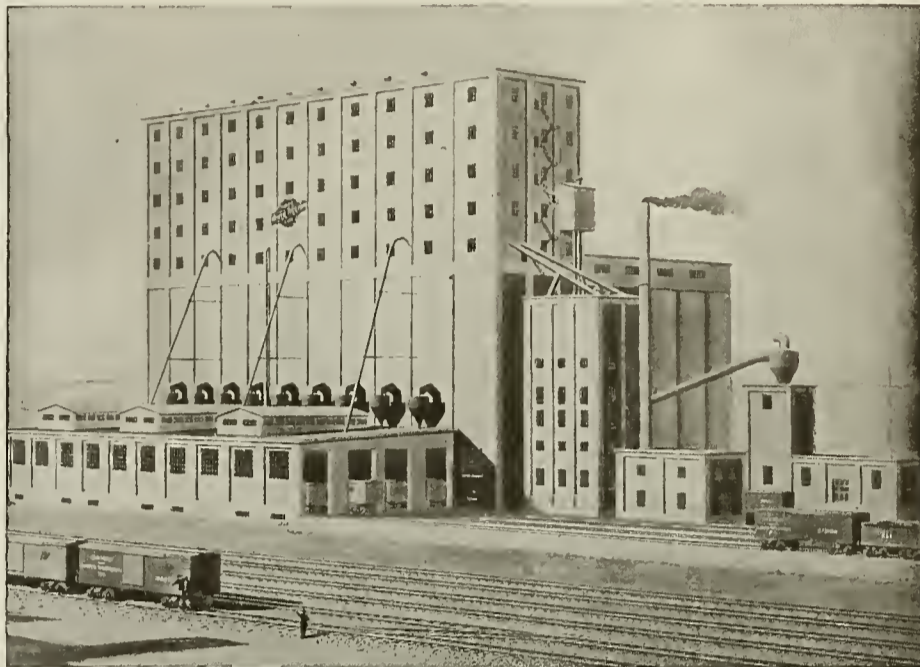
GRAIN ELEVATOR DEPARTMENT

Fifteenth Floor of Westminster Building

CHICAGO, ILL.

W. R. SINKS, Manager

Chicago & Northwestern Railway Company's New
Reinforced Concrete Grain Elevator at Council
Bluffs, Iowa, for the Updike Grain
Company of Omaha, Neb.



Our experience covers every branch of grain elevator
building work as well as any type or style of construc-
tion to meet requirements in any locality.

Designs and estimates promptly furnished.

Witherspoon-Englar Company

1244-1250 Monadnock Bldg.

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The Barnett & Record Company

GENERAL CONTRACTORS

Designers and Builders of

Grain Elevators, Flour Mills and Heavy Structures

Reinforced Concrete and Steel Ore Dock con-
structed at Superior, Wisconsin, for the Allouez
Bay Dock Company. Entirely Fireproof.

Write for Designs and Estimates

OFFICES:

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Duluth, Minn.

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ARE YOU WORRIED

about the condition of that grain in your bins?

Let us equip your storage with a

Zeleny Thermometer System

to tell you the exact condition of
the grain and cut out the worry

Over 100 Elevators Equipped

Write for Description

WESTERN FIRE APPLIANCE WORKS

542 South Dearborn Street

Chicago

Reinforced Concrete Elevators

Grain Storage—Flour Mills—Warehouses

**SAVE THEIR COST IN
REDUCED INSURANCE**

Write us your needs. Get
our estimates and sugges-
tions before building. We
are specialists in this line
of construction and our
experience insures you a
modern plant at the mini-
mum cost.

The Spencer Construction Co.
Successors to Deverell Spencer & Co.
Garrett Building BALTIMORE, MD.



INCONTESTABLE PROOF



30,000-Bushel Elevator Built for the Covington Grain Company at Foster, Ind.

is furnished all through the central territory of the efficiency of

Reliance Constructed Elevators

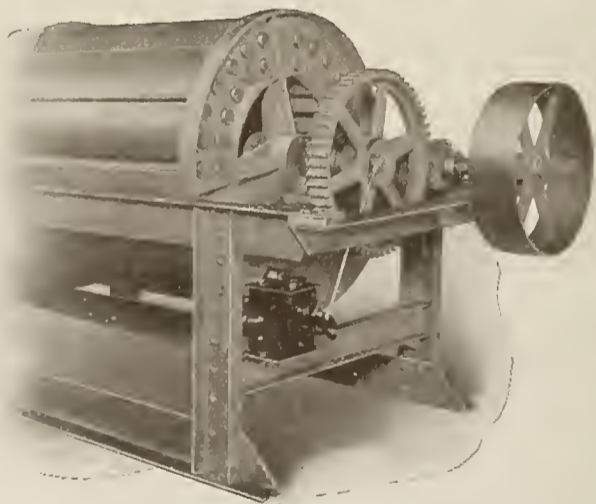
These elevators mean a stronger, better structure and an arrangement of machinery providing economy in handling both incoming and outgoing grain.

Repeat orders tell the story. The elevator shown herewith is the third house we have built for the Covington Grain Company.

We build both wood and concrete

Reliance Construction Company, Indianapolis., Ind.

ELLIS ROTARY DRIERS BALL BEARING



Showing Positive Feed Lubrication

gear shaft. It delivers a definite amount of oil to the rotary joint at each lever stroke, insuring smooth running and long life at any steam pressure and at all speeds.

This is only one point of difference among many which is giving the Ellis Rotary Drier a very deserving reputation for being the best on the market.

The Ellis Drier Company, 332 South La Salle St., Chicago, U.S.A.

Globe Combination Auto Truck & Wagon Dump

SIMPLE - RELIABLE - PRACTICAL
(SPENCER PATENTS FEB. 1919)

---with the Tilting Cylinder

---the "dump within a dump" enables you to handle Trucks, Wagons and Sleds simply by shifting the Tilting Power cylinder forward or backward, depending on whether Trucks or Wagons or Sleds are to be dumped.

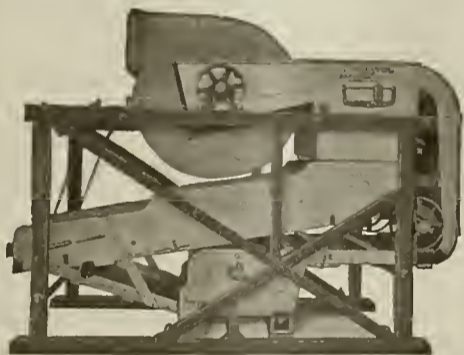
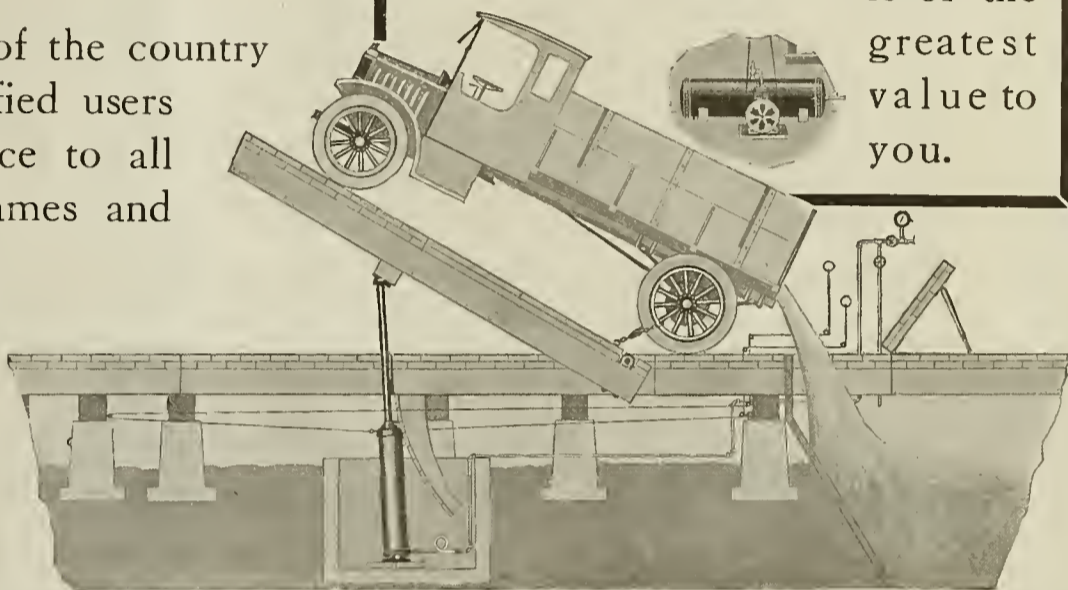
Many of the most practical elevator men of the country recommend the Globe Dump—scores of satisfied users will tell you why they chose it in preference to all others. We'll be glad to give you their names and addresses. We want you to investigate.

**Write for Blue Prints and
Descriptive Literature**

Globe Manufactured by
Machinery and Supply Co.
Des Moines, Ia.

---Simple and Safe

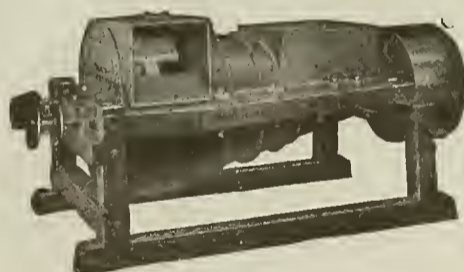
Absolute safety—ease of operation and simplicity of installation are features recognized and praised by all users of Globe Dumps. They are really "fool proof." The fact that an accident is impossible is of the greatest value to you.



The U. S. Grain Cleaner



The Constant
Safety
Ball-Bearing
Man-Lift



The U. S. Corn Sheller

The character and dependability of a manufacturer is equally important with the subject of quality, strength and service in his machinery.

The best assurance you can have of the two first points is to look at the record of the manufacturer's business principles extending over a period of years. For the remaining three points look at the record of his machinery.

We invite the closest scrutiny both of our business principles and our machines. The CONSTANT trade mark has been a guide to good buying of grain elevator machinery for many years. You may therefore enjoy the economy and satisfaction that comes from purchasing the CONSTANT line, without doubt or hesitation, knowing that you will receive quality, service and fair treatment.

B. S. CONSTANT MANUFACTURING CO.
BLOOMINGTON ILLINOIS



Tropical Paint Used Here Since 1911

Nine years ago The Rea-Patterson Milling Company of Coffeyville, Kansas, bought their first Tropical Paint. They have been buying from us ever since, both at the plant shown above and also at Republic, Mo.

Cementkote on their concrete grain bins—Elastikote on brick work—Toco Mill White on interior walls and ceilings—Tocoseal and Roofkoter on the roofs—Tropical Boiler Seal on brick boiler settings.

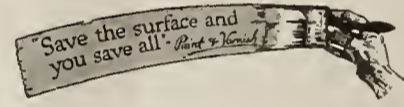
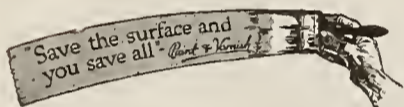
For many years we have been manufacturing Paints, Enamels and Roofing Materials for the grain trade. Our products have been used on all kinds of elevators and mills from the largest grain unloading elevator in the world to small country flour mills.

You should protect your plant with Tropical Products. A letter to us will bring one of our representatives with prices and complete information.

Our booklet, "Tropical Paints for Grain Elevators" shows illustrations of many of the elevators and mills where our goods have been used. A copy is yours for the asking.

The Tropical Paint & Oil Co. Cleveland, Ohio

*Specialists in the Manufacture of Protective
Coatings for Grain Elevators and Flour Mills*



WATERBURY FIBRECLAD WIRE ROPE



is one-third the diameter and one-half the weight of a Manila rope of the same strength, and actually costs less because it wears so much longer.

Smaller and lighter rope means cheaper sheaves and pulleys—while the marine serving adds the weather and wear resisting surface of Manila to the strength of wire and produces a durability greater than either Manila or bare wire rope.

Fibreclad is not only kept from rusting by the tarred marine serving of each strand, but the fibre covering also retains the internal lubrication which lengthens the life of the wire strands.

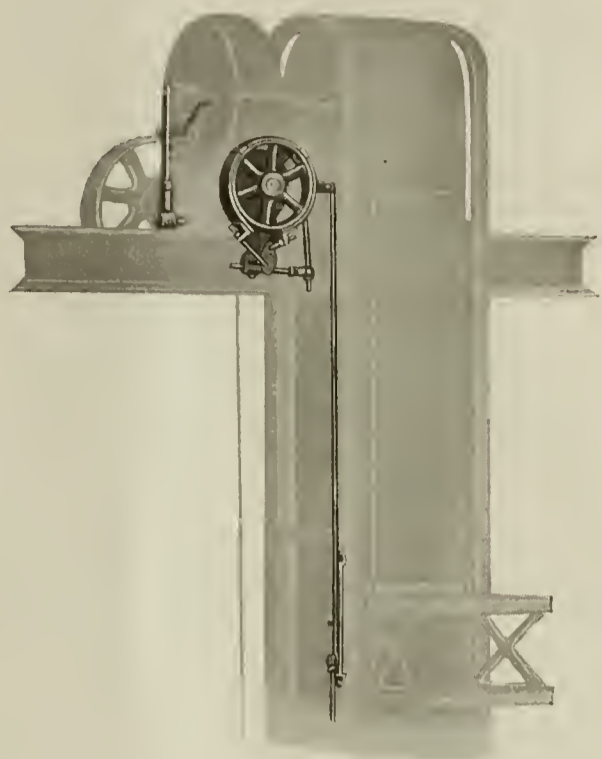


160,000 rope buyers use the Waterbury GREEN BOOK as a guide. A copy will be sent you on request.

WATERBURY COMPANY 63 PARK ROW, NEW YORK

MAKERS OF WIRE, ARMORED, FIBRE AND FIBRECLAD ROPE AND MUSIC WIRE

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Dallas, TexasA. T. Powell & Company



N. & M. CO. SERVICE ELEVATOR
WITH
**AUTOMATIC
SAFETY DEVICE**

WITH the upper terminal automatic stop in operation there is no danger of being carried overhead and injured. The weight of the passenger after the top floor is reached automatically throws a lever, shutting off the power and applying the brake, thereby locking the belt and steps against movement in either direction.

The automatic stop mechanism furnished with the Nordyke & Marmon Company service elevator adds the vital feature of safety to the elevator's other excellent qualities of reliability and utility.

Send for Service Elevator Circular.

NORDYKE & MARMON COMPANY

Established 1851

INDIANAPOLIS

INDIANA

AMERICA'S LEADING MILL BUILDERS

NUTRITIA FEEDS

for

Horse-Cow-Chicken-Hog

REPRESENT the best of balanced rations—all time tested and tried and manufactured under the strictest supervision.

Each food is complete in itself and contains such elements of nutritive values as will keep the stock in pink of condition.

Dealers who are looking for a representative brand of Stock Feeds should investigate our selling and agency proposition.

THE NUTRITIA CO.

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CINCINNATI

Manufacturing Plant:
Lawrenceburg, Indiana

Distributing Plant:
Hopkins & President Place
Cincinnati



We buy and sell Hay, Grain and Millfeed—in the market all the time. Write, wire or phone us.



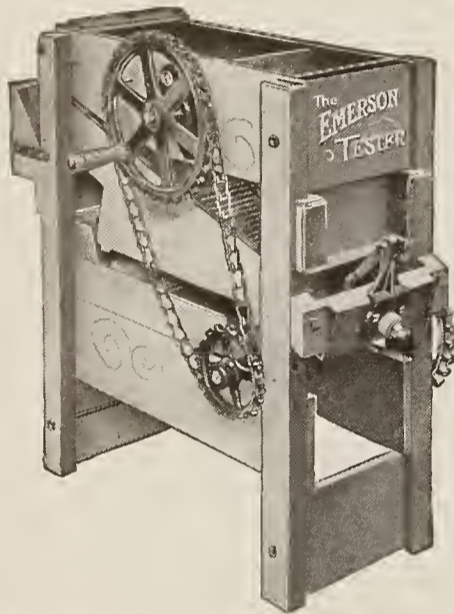
DOCKAGE TESTER

adopted by
U. S. GOVERNMENT

Present conditions demand accuracy in testing grain—your profits depend upon your tester. Don't take chances with experiments or guess.

THE
EMERSON

is no experiment. It is men and officials who all times and under all

NEW
KICKER

used by all grain must have accuracy at conditions.

**10,000
KICKERS**

are now in use—the Government uses over 100—Line, Independent and Farmers' Elevators all over find the Emerson dependable and a sure enough arbiter between seller and buyer on any dockage dispute.

Write for pamphlet and particulars.

Emerson Mfg. Co.
2821 Lyndale Avenue So.
Minneapolis, Minn.
Winnipeg, Can.

Can Be
Furnished
with Motor Drive

THE RECORDS

of the

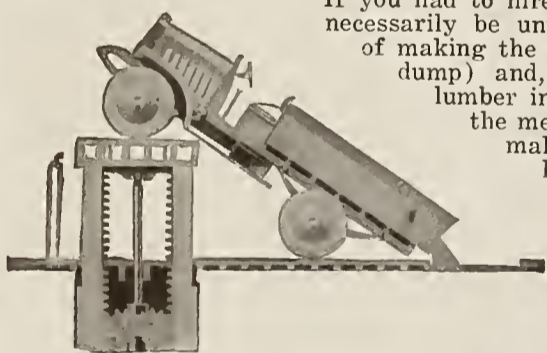
Flour Mill and Grain Elevator
Mutual Insurance Companies

show that 80% of all fires in Mills or Elevators start in elevators. The installation of an automatic feeding device which will positively prevent an elevator choking from over-feeding and an automatic relief which will prevent an elevator choking from bin getting full or spout choking, will annually save millions of dollars in fire loss and add at least 50% to efficiency of any stand of grain elevators. These devices are perfected and are available for mill and elevator owners, are very inexpensive and absolutely practical. Full particulars will be furnished free of charge by this office, on request.

Mutual Fire Prevention Bureau
OXFORD, MICHIGAN

ONE FEATURE
Of Most Importance

with present high prices, as well as the scarcity of skilled mechanics, and the high price of lumber, is the fact that the Trapp Truck Dumps and the Trapp Combination Truck and Wagon Dumps are sent complete; all parts, both of iron and wood, are finished in the Trapp-Gohr-Donovan factory. When you order a Trapp Truck Dump you can rest assured that it will be sent complete—all ready to be installed in your elevator.



If you had to hire a mechanic (who would necessarily be unfamiliar with the details of making the wooden parts for a truck dump) and, if you had to buy the lumber in your town, and you and the mechanic attempted to finish making the dump, you would have a big job ahead of you. The expenses in the aggregate would make the total cost of the dump, when finished, considerably higher than the Trapp Dumping System.

This Is No Mere Surmise

we are simply telling you what we have heard in many instances from other elevator men who have bought truck dumps or combination dumps of other make. If you knew of all the difficulties, in addition, which you might encounter if you order a dumping system of some other manufacture—some other dump with which you would get nothing more than the iron parts and blue print directions and instructions telling you how to finish manufacturing the dump yourself, you would decide every time to order a Trapp Truck Dump instead of any other.

WRITE TO US NOW in regard to prices; and ask us about any detail or any feature which you do not thoroughly understand.

THE TRAPP-GOHR-DONOVAN COMPANY

Manufacturers

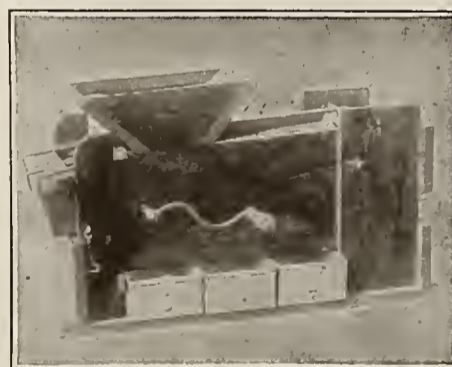
1125-27-29 North 22nd Street

Telephone: Webster 464

Omaha, Nebraska

How Much Dockage?

A difference of a gram in a Sample makes a difference of bushels in a carload.



The Cowan Dockage Tester

The Cowan
Dockage Tester

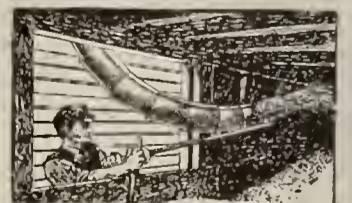
is reliable to the last kernel of the sample. Simple in construction, easy to operate, and rapid.

Load Cars the Better Way

with an

Englehart Loader

Even loading from end to end may save expense of reinspection. A few loadings pay for it in savings.



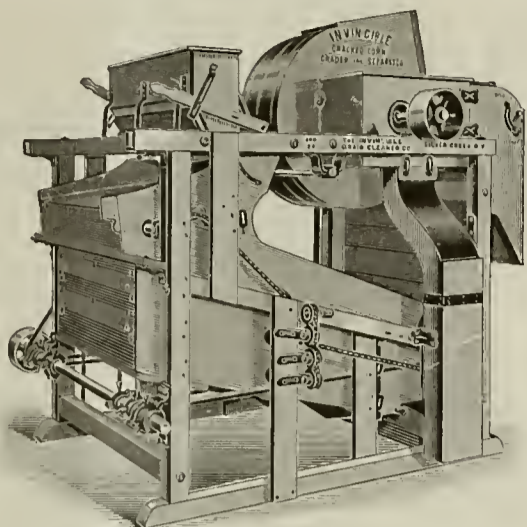
The Englehart Loader

Write for full information

The Cuthbert Company

408 Corn Exchange

Minneapolis, Minn.



Cracked Corn Products can be manufactured by nearly every grain handler without the necessity of an expensive installation and with positive assurance of profits therefrom.

The important part of the process is the grading and cleaning after the cracking or grinding has been accomplished.

The INVINCIBLE will make three distinct grades (coarse, medium, fine), removes the hulls separately, the meal separately, and the uncracked kernels which can be returned to the grinder. Each separation is thoroughly cleaned by air. All screens are kept clean by automatic brushes.

Invincible Grain Cleaner Company
Silver Creek, New York

Motor Driven Attrition Mill—Also made for Belt Drive.

"Bauer" Attrition Mills For Better Grinding.

Bauer Mills are designed and built with full knowledge of just what a Miller needs in such a machine—a first hand acquaintance with your problems.

More important, Bauer Mills are every day making good on the job, turning out uniform product and turning it out profitably. You can't find an easier running machine. Naturally it uses little power. Lubricant costs also are at a minimum.

We know this Mill is right. Let us prove it to you, by giving you full details about its construction.

THE BAUER BROS. CO.
517 Bauer Bldg. Springfield, Ohio, U. S. A.
Makers of Single Disc Mills, Centrifugal Bolting Reels, Corn Crackers, Breakers, etc.

How Do Your Men Travel from Floor to Floor?

Do they have to plod up and down stairs in the old, out-of-date way—wearing themselves out, wasting valuable time, and a yearly loss to you of hundreds of dollars? Or do they

RIDE ON THE HUMPHREY

Endless Belt route, thereby keeping themselves fresh for better work, increasing your output and cutting down your overhead, besides keeping in a cheerful, willing frame of mind? These are

ABSOLUTE FACTS

and we are ready and willing to prove them to your entire satisfaction. The secret of a competitor's increased production and better prices is probably due to his use of the Humphrey.

For 33 years the Humphrey has stood the test, and today is the natural leader. Construction, material and reputation for the "best" cause it to be specified by both large and small mills, elevators, engineers, and construction companies.

IF YOU HAVEN'T ONE YOU PAY FOR IT ANY WAY

Send for Bulletin A2

If not made by Humphrey Elevator Co. it's not a genuine "Humphrey."

HUMPHREY ELEVATOR CO.
SOLE MANUFACTURERS
FARIBAULT, MINN.



Fairbanks Scales



A Grip of the Handle Prints the Weight

With Type Registering Beam give you accurate weights in triplicate, printed on a permanent record card. No errors in copying scale readings. It builds customer confidence.

WEIGHED ON FAIRBANKS TYPE-REGISTERING BEAM

Load *Corn R. B. Ward* Date *1/26/20*

From *84 90* lbs To *23 60* lbs

Gross *84 90* lbs

Tare *23 60* lbs

Net *61 30* lbs

Price *\$1.70 per bu.*

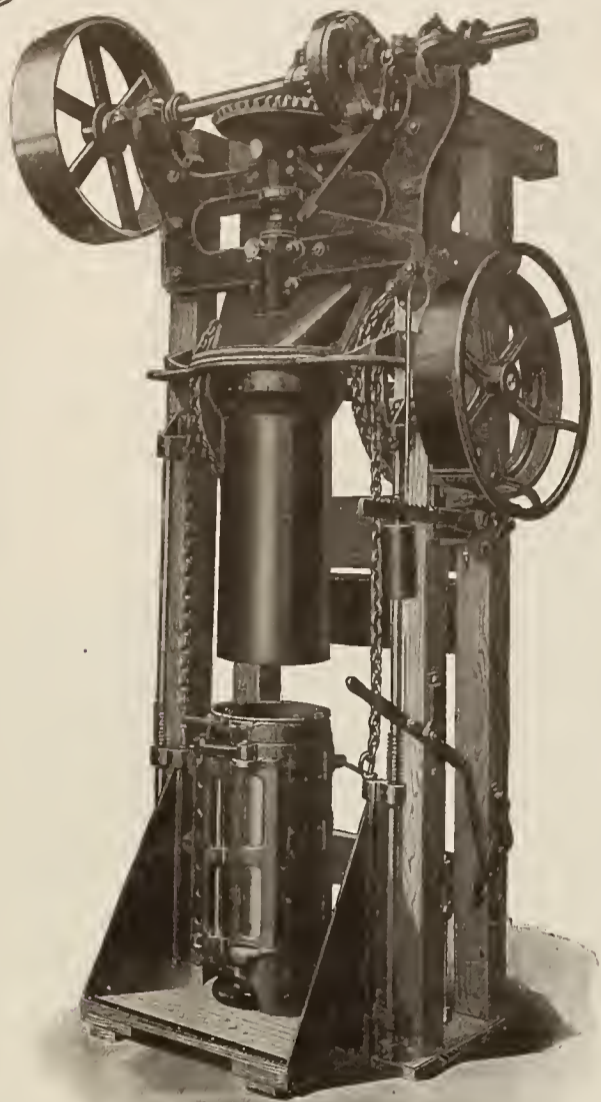
Weight *1052*

By *L. S. Perry*

Can be Used on any Fairbanks Wagon or Auto Truck Scale

Fairbanks, Morse & Co.
CHICAGO

Engines, Motors, Light Plants, Scales, Feed Grinders, etc.



MOGUL BRAN AND FLOUR PACKERS

Lead Where Performance Counts

"Performance" is the final test of a Packing Machine's worth. The manner in which a Packer acts when the operator takes hold of it is what counts in the long run, and it is this self-same "Performance"—and nothing else—which has stamped the name "MOGUL" so indelibly in the minds of the milling public.

Wherever "MOGUL" Packers are operated, their "Performance" brings forth expressions of unqualified satisfaction from the users.

May We Assist You in Solving Your Packer Problems?

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Eureka Works

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European Branch: 64 Mark Lane, London, England.

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J. E. Gambrell, 749 E. Church St., Marion, Ohio.
W. M. Mentz, General Delivery, Sinks Grove, W. Va.

J. Q. Smythe, 3951 Broadway, Indianapolis, Ind.
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Peters' Alfalfa Cutters

Differ from all of the other machines on the market in the quality, character and uniformity of the alfalfa meal produced

The Quality of Peters' Alfalfa Meal

Has attracted the attention of prospective alfalfa meal producers to the PETERS' machines

Contracts are being made now for Fall installation

WRITE US FOR
FURTHER INFORMATION

United Alfalfa Co.

213 Grain Exchange Bldg.
Omaha, Neb.



JACKS

for lifting forms for elevator construction.

Manufactured and Sold by

NELSON MACHINE CO.

WAUKEGAN, ILL.

THE BIRD SHIPPING SCALE



Proves Correct
Weights

Only scale on the market with an automatic record of every pound to every draft.


No chance for mistake.

Absolutely Fool Proof.


Send for Catalog

The Strong-Scott Mfg. Co. Minneapolis, Minn.


Let
Us
Prove
to
You
What
the
Bird
Scale
Will
Do



Section of
Old Style Flight



Section of
Helicoid Flight



Section of
Helicoid Flight

HELICOID

Helicoid conveyor has a stronger flight and a heavier pipe than the same diameter of old style conveyor, and Helicoid flight and pipe are put together so they support and strengthen each other. Helicoid flight has a shovel edge. Other has blunt edge.


Helicoid flight is one continuous strip of metal end to end of pipe. Other is short sections lapped and riveted together every turn or half turn around the pipe. Helicoid is a smooth, nicely-balanced spiral, and has no joints to wear out and open up.

Helicoid requires fewer repairs, and less power to drive it.

Helicoid costs no more than inferior kinds of conveyor; it's all-round satisfaction at the same price.


Ask about our Steel Conveyor Boxes, too.

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LIGHTNING RODS

Prevent Lightning Losses

A lightning stroke may put you out of business for a year. Last season millions of dollars' worth of property were destroyed that could easily have been saved with Shinn-Flat Conductors. Besides, they lower the insurance rates.

Shinn-Flat is the only lightning rod made of pure copper wire woven in the form of a flat cable—and is much more efficient. It has 36 per cent greater capacity for conducting electricity than the same amount of material made into a round cable.

We have representatives and dealers throughout the United States and Canada, one of whom will quickly install Shinn-Flat for you. Tell us the size of your elevator or other building.

W. C. Shinn Manufacturing Co.
1240 Lytton Building CHICAGO, ILL.



The "Knickerbocker Cyclone"
Dust Collector
For Grain Cleaners
ALL STEEL

Write for Catalog

The Knickerbocker Company



Jackson, Mich.



A PROFITABLE INVESTMENT

Every elevator owner is operating to disadvantage who is trying to get along without a

Cyclone Dust Collector

Do not delay longer but write today for full particulars on the installation of our system.

CYCLONE BLOW PIPE CO.
2542-52 Twenty-first Street, Chicago, Ill.

Complete new systems installed on modern plans and guaranteed. Old systems remodeled on modern lines on most economical plans. Supplementary systems added where present systems are outgrown. Defective systems corrected and put in proper working order.

SEE THAT YOUR CONTRACT CALLS FOR

THE CUTLER MEAL DRYER



SOLD BY ALL
MILL
FURNISHERS

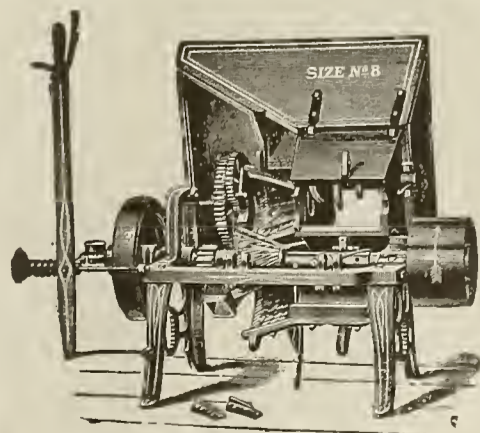
Not An
Experiment

All Metal Steam Dryer

IN SUCCESSFUL USE 40 YEARS DRYING
CORN MEAL, HOMINY, BREWERS' GRITS AND MEAL, AND ALL CEREAL
PRODUCTS. ALSO SAND, COAL DUST, GRAPHITE, CLAY, ORES, ETC.
(Automatic in operation, requiring no attention)

THE CUTLER CO., North Wilbraham, Mass.
CATALOG ON REQUEST

Make Feed Grinding More Profitable!



Mill opens like this in six minutes.

The N. P. Bowsher Co., South Bend, Ind.

Bowsher's "Combination"
Mills do this

Because their large capacity, cone-shaped grinders and positive self ear feeders are properly designed to direct every ounce of power energy to the actual reduction of the grain.

Crush and Grind ear corn, husked or unhusked, alone or mixed with any kind of small grain in any desired proportion. Reduce the material to any fineness desired for feeding purposes.

11 Sizes, 2 to 25 H.P.
Sold with or without Sacking Elevator.



Established 1877

LANGENBERG BROS. GRAIN CO.

ST. LOUIS

MEMBERS:

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GRAIN and HAY**

43 Years of Knowing How

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LANGENBERG HAY & GRAIN CO.

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*Fastest Growing Commis-
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and

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With ample shipping facilities, insuring
prompt delivery and uniform grading

Dealers in HIGH GRADE FERTILIZERS, TEAM
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Warehouses located on Bangor and Aroostook and Canadian
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Established 1901

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COMMISSION

Hay and Straw

NEW YORK

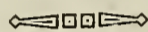
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JERSEY CITY

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Brokers and Commission Men

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All Over the

South Atlantic States

WE are in a position
to furnish good
Wisconsin and Michigan
Hay for prompt ship-
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all grades.

Write or wire us for
prices.

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Rhineland, Wis.

The Denver Alfalfa Milling and Products Co.

Lamar, Colo.

Floyd Wilson, General Manager



Twelve Mills operating in
Colorado, New Mexico and
Kansas—

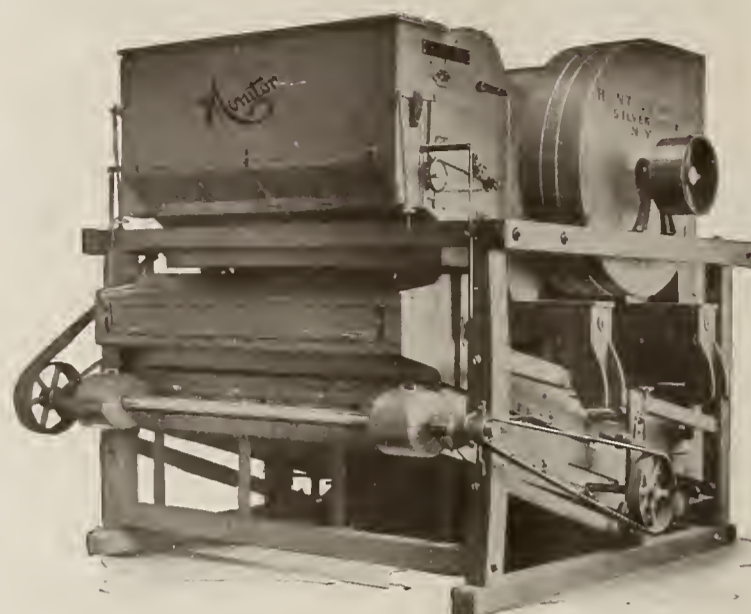
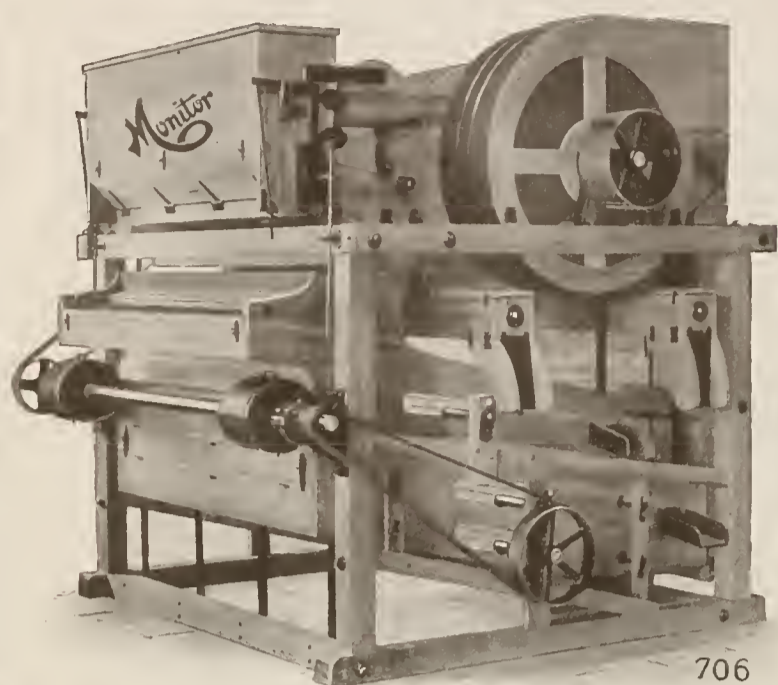


*Just a Little Better Service
and Quality.*

Brauer & Kasten HAY

We Solicit Your Consignments

RICHMOND - VIRGINIA



Two Models of Class

Style A

A Four Screen Type—Giving an extra run of main screens to handle special requirements. Automatic Brushes under all screens but scalper. Disc oiling eccentrics. Ball bearing fan shaft if wanted. In-built-quick-reversible discharge spouts. Conveyor screenings discharge. Template made inter-reinforced screens. Compounded Shoes. Low speed one-piece fans. Adjustable from outside escapement gate. Internal compensating air regulators.

Style B

Differs from above only in that it has three screens, for other details see above.

Do you find anything Lacking?

The users say "It Is All There."

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Canadian Plant
Huntley Mfg. Co., Ltd.
Tillsonburg, Ont.

P. O. Drawer E

SILVER CREEK, N. Y.

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Official paper of the Grain Dealers' National Association and of the Illinois Grain Dealers' Association.

Established in 1882.



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NO. 1

A New High-Water Mark In Elevator Construction

Northern Central Canton Elevator at Baltimore, Md., Embodies More Structural and Equipment Innovations Than Have Ever Appeared In a Similar Plant

WITH the completion of the new 5,000,000-bushel Pennsylvania Railroad, Northern Central Canton No. 3 Elevator at Baltimore, Md., James Stewart & Co., Inc., of Chicago, the designers and builders, have set a mark in elevator construction far above anything ever attempted. Without any question the house is the

as the joints made by a skilled cabinet maker. The results, viewed from the standpoint of a spectator, seem simple enough, but the engineering skill and ingenuity involved in attaining this smooth running and orderly effect make the accomplishment a real triumph for the Stewart organization, and particularly for W. R. Sinks, man-

The loading gallery with its six 42-inch belts and the gantries in front of the workhouse can all be utilized simultaneously; as much as 60,000 bushels of grain per hour can be loaded into one hatchway, if desired. The details of the unloading equipment will be given separate treatment later.

The house is in eight units: The workhouse;



NORTHERN CENTRAL CANTON ELEVATOR NO. 3, BALTIMORE, MD., OWNED AND OPERATED BY THE PENNSYLVANIA RAILROAD

most rapid handling grain structure in existence and it is difficult to conceive of any department in the house being improved in this respect. And along with this speed of operation, the design permits of a maximum of safety and the irreducible minimum of labor employed.

There are two prime factors involved in the great handling capacity of the elevator, a receiving capacity of 320 cars in eight hours, and a shipping capacity of 180,000 bushels per hour. The first factor is the four Stewart-Link Belt Car Unloaders; and the second is the co-ordination of all grain movement, in that all elevators, belt conveyors, and spouts have a unit capacity of 20,000 bushels per hour without crowding. At no step in the grain movement does any part of the equipment have to wait for another, nor is there any waste of power. From the car dump to the shipping spout the various processes dovetail as nicely

ager, and T. D. Budd, chief engineer, who together are chiefly responsible for the undertaking.

The new house gives Baltimore the greatest grain storage capacity on the Atlantic Coast, and the situation of the port with the consequent lessened rail haul will undoubtedly make it the great grain port of America, so that the new house will need all its speed and all its storage tanks to take care of the business which will be offered. In fact, a test will come shortly if the rumor is true, that the Pennsylvania Railroad will soon put a fleet of new grain cars into operation between Buffalo and Baltimore. This will afford a rapid movement of grain from Lake Erie to relieve the congestion there, and will insure prompt loading at the port if vessels are furnished.

The new Northern Central, Canton Elevator has ample trackage and a water frontage which will accommodate five ocean steamships at one time.

three batteries of storage bins known as Annex 1, Annex 2, Annex 3; the drier building; boiler house; dust house; and office building. The workhouse has four unloading pits from which grain is received by conveyor from the car unloaders; 19 stands of elevators; 10 No. 15 Invincible Warehouse Separators with a combined capacity of 75,000 bushels per hour; 23 Solid Lever Scales made by the Standard Scale Company; 14 belt conveyors 42 inches wide carry the grain from the headhouse to the storage bins or drier, and as each of the conveyors has a capacity of 20,000 bushels per hour there is no danger of congestion in the headhouse even though the extreme limit of close to 400 cars a day are handled. The workhouse has a bin capacity of 650,000 bushels. Including the storage tanks, the drier and the workhouse, the plant has a total of 522 bins.

The dimensions of the various buildings are as

follows: The headhouse is 83x212 feet on the ground plan and 225 feet high; the original storage Annex, No. 3 is 200x100 feet and 110 feet high; Annex No. 1, just completed, is 225x195 feet on the ground and 125 feet high; and Annex No. 2 which is not yet completed is 240x195 feet and 125 feet high. The drier house is 34x64 feet on the ground plan; the boiler house, 52x47 feet; and the dust house 36x36 feet. The boiler house is equipped with three 200-horsepower boilers.

The drier house is equipped with Morris Driers

chart in the grain dispatcher's office, located on the scale floor, and by complete telautograph system he can direct the grain through the house as he pleases. The operation of the telautograph signalling device is interesting, as it is the first time, so far as we are aware, that it has been employed in a grain elevator. There are 25 machines in the building. The grain dispatcher decides upon the movement of any parcel of grain. He pushes

grain gets to a certain level the check automatically stops the elevator and the belt feeding the bin. If an elevator chokes it stops automatically and a special device at the head holds the belt so that the loaded side cannot slip back. If grain rises more than three feet in the boot, the feed to the boot is shut off until it is again at the proper level. At every step of its progress through the house the grain is protected against misadventure, and almost all fire hazards are eliminated. All the spouts have a choke feed so there is practically no



SCALE FLOOR—HANDWHEEL IN FOREGROUND OPERATES TURN-HEAD UNDER SCALE

of 4,000 bushels per hour capacity. The drier can be set to extract any desired amount of moisture and will perform its function without further attention. Grain can be sent from the scale or from any bin to the drier and discharged direct to a shipping bin or put back into storage. There are eight units of 500 bushels each in the drier with grain storage of 3,000 bushels above and below each. The grain is held until the house unit of 20,000 bushels has been dried, then it is all moved.

The car unloader building is 68x84 feet. There



MAYO SPOUTS ON BIN FLOOR

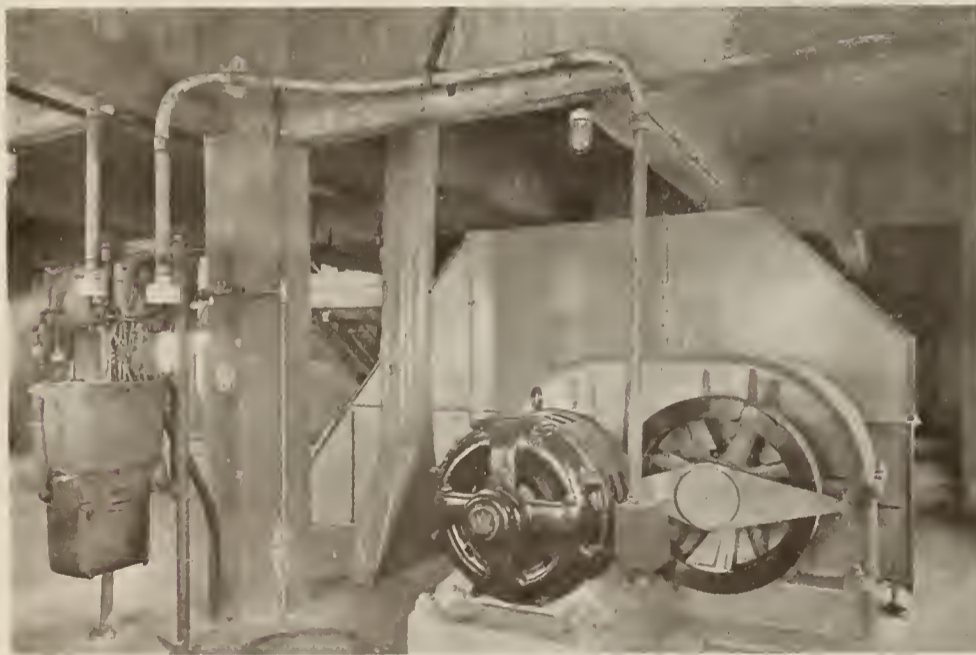
a button calling each man in the house who would be involved in that particular movement to his station. Then he writes the order on the telautograph which is duplicated at the station of every man called. They read the order and execute their part and when they have done so they press a button which lights a small electric lamp in the dispatcher's office. When all the lights are lit on the route designated, he knows that the route is ready



SPOUTING RING UNDER EACH SCALE

escape of dust into the house and consequent loss of weight from this cause.

The cars are received over four tracks of the Pennsylvania road. The elevator yard extends from the Canton Railroad tracks to the end of the pier along which the unloading gallery extends. To obtain the maximum car handling capacity the Stewart-Link Belt Car Unloaders are placed midway between the Canton tracks and the pier end. By this arrangement 16 loaded cars can be placed on each of the four tracks and unloaded without



STEWART-FALK HEAD DRIVE



SPOUT RING AND SPOUTING ON TRANSFER FLOOR

is a covered drip shed just beyond the unloaders where the cars dry so the water will not drip into the grain dump or the machinery of the unloader. This drip shed is 120x80 feet in size.

The dust house is direct connected with the Day Dust Collecting System of the plant. The dust is delivered to bins under which are spouts and packers so that the dust can be sacked or loaded into cars in bulk. The office and welfare building is completely equipped with recreation and lunch rooms on the first floor, and the general offices on the second floor.

Every bin in the house is represented on the

for the movement of grain and signals for it to begin. There is no chance for a mistake in the order, as it is plainly written out for each man to read.

In this office also is registered the temperature of the grain in all the bins by the Zeleny Thermometer System. The operation of the entire house is by electricity. No device or equipment which would eliminate a man or insure more prompt or accurate movement has been omitted. The house is as near automatic as it is possible to make it and is interlocked in its operations. The bins all have an overflow check. When the

the use of a switch engine. Each track has an unloader which discharges to a conveyor belt which in turn, carries the grain to the headhouse.

Each track is equipped with a disappearing barney, which will drop down below the level of the track or rise up and pull a string of 16 cars either forward or backwards, as the operator of the car unloader in the track shed may desire. Each barney is controlled by heavy endless cables.

The operator of each car unloader is stationed in a glass house just above and beside the car on his unloader, so that he can easily see what is going on at every stage of the operation. The cars

are not damaged, marred or soiled in the operation.

When, with the assistance of the barney, the operator has pulled the foremost car to the middle of his unloader, he first anchors the car, then pushes in the grain door and slowly tips it to different positions, so that all grain will be readily



W. R. SINKS
Manager, James Stewart & Co., Inc.

dropped into the receiving sink. A large car is unloaded just as quickly as a small car.

Each movement of the grain car unloader is controlled by an individual motor, and all motors are operated only from the operator's house. All motors and operating devices are so arranged that when the first and each succeeding motor is set in motion, each in its order will perform the service for which it was designed, and automatically stop when its cycle of operation is completed. When it is completed, it automatically connects the next cycle of operation.

The unloader is worked with the services of two men, one in the operator's house, and the other



T. D. BUDD
Chief Engineer, James Stewart & Co., Inc.

to uncouple cars and operate the air hose to dislodge grain caught behind linings or frame, and sweep the car.

The operator after getting car on unloader starts Motor No. 1, which controls the clamps at the ends of the car and holds fast the couplers. These clamps, when not in use, drop down below the

level of the rails, out of the way. They are so arranged that they will firmly engage the couplers of cars of any length.

When the end clamps *B*, shown in the diagrammatic sketch, have exerted a certain pressure, the power is automatically thrown out, and the motors controlling the side supports, marked *C*, are set in operation. These side supports move up against the side and sill of the car on the receiving sink side, and when they have exerted a certain pressure the power is automatically thrown off, and Motor No. 3, which controls the grain door opener, is set in operation.

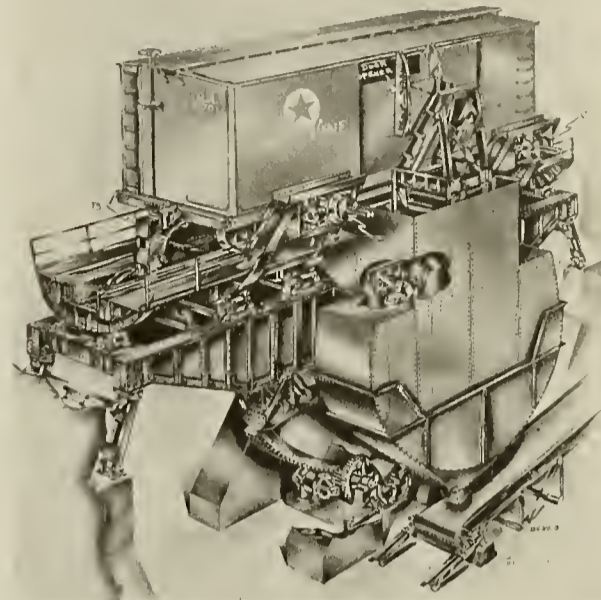
The grain door opener is operated by a motor which moves it steadily in fixed lines. The front of the opener first drops so that the lower edge rests on the floor in the doorway. Two upright bars bear on their faces small, sharp pointed pins, which immediately engage the outer surface of the grain door, just beside the car door posts. The grain door is quickly pushed in about six inches and raised a similar distance from the floor, so as to insure the breaking of all connection with the door posts.

The grain door is retained on the sharp prongs of the door pusher until all grain has run out and the car has been swept out, when the pusher is withdrawn and the grain door drops to the floor of the car intact, without being touched by hand.

As soon as the grain door opener has pushed the grain door to its limit, the next motor, No. 4, is automatically connected and this motor quickly tips the car sidewise to an angle of 30 degrees. As the grain door is retained on the face of the door opener, which remains stationary, the tipping of the car sidewise greatly increases the opening be-

draws the side supports and the reversal of Motor No. 1 withdraws the coupler clamps and drops them below the level of the rails.

The car door can be removed in 15 seconds and the car emptied in three minutes. Including spot-



ELEVATION OF STEWART-LINK BELT CAR UNLOADER

ting and removing the car the operation takes from 7 to 10 minutes, but it is confidently expected that, with practice, this time can be considerably reduced. It is estimated that these four unloaders save employing about 68 men to unload the same number of cars.

As the grain is elevated to the head of the house



UNLOADER IN OPERATION WITH CAR HELD AT AN ANGLE OF 30° SIDEWISE AND 45° ENDWISE

low the grain door and permits the grain to drop into the hopper of the receiving sink.

When the car has been tipped sidewise, to an angle of about 30 degrees, the current is automatically transferred to Motor No. 5, which in its turn tips the car endwise to an angle of 45 degrees while it remains at 30 degrees sideways. This permits the grain in the up end of the car to run out rapidly.

Motor No. 5 is then placed in reverse motion and the car is tipped into a directly opposite position so that all grain runs out from other end of the car box. Then Motor No. 5 is again brought into operation and car is raised to a horizontal position. Motor No. 4 is reversed and car is brought to a normal position. The doorman then enters with air hose and dislodges grain from linings and sweeps it out. As Motor No. 3 is reversed the grain door pusher is withdrawn and the grain doors or lumber are dropped to the floor of the car. The reversal of Motor No. 2 with-

another innovation is encountered. The Texas is dustless. The elevator heads are enclosed in iron housings which permit no dust to escape. The motors driving the elevator heads are direct connected to Stewart-Falk Helical-Cut Herringbone Gears which effect the reduction in the speed for the elevator pulleys with a loss of only 2½ per cent in efficiency at the head pulley, as against a loss of 15 per cent where rope drive is used. This gear is the most economical device for speed reduction ever devised. As there is 600 horsepower on the elevator heads costing approximately 1¼ cents per horsepower-hour you can figure what this saving of 12½ per cent over ordinary head installation means. The backstop securely locks and holds the belt if it is stopped under load to prevent slipping back under weight of the full buckets. This head drive absolutely eliminates any danger of misalignment or friction in the elevator head. It is self-oiling and noiseless and is undoubtedly one of the greatest advances in ele-

A NEW PARTNERSHIP

After five years with the Grain Dealers National Association as traveling representative of *Who is Who in the Grain Trade*, Philip C. Sayles has resigned his position to enter the grain, hay, feed and grain products business, in a partnership of



PHILIP C. SAYLES

which the second member is Edward D. Smith, who has had many years' experience in the grain and milling business.

Mr. Sayles is a young man but his association with *Who is Who* has given him a wide acquaint-



EDWARD D. SMITH

ance in the trade and an intimate knowledge of the procedure of grain transactions. These will prove of undoubted value to the new firm.

The office of the Smith & Sayles Grain Company will be at 220 Wesley Building, Columbus, Ohio, and it will be a busy place if all the sincere wishes of the friends of the young men are granted.

ALASKAN GRAIN

When the gold rush to Alaska was at its height, something over 20 years ago, C. C. Georgeson was sent to Juneau by the Department of Agriculture to investigate the agricultural possibilities of the territory, and if he found any to develop them. He was laughed at by the prospectors and traders whose thought was only of gold and who believed that Alaska had too cold a climate to raise any cultivated crops. Most of those early prospectors are gone, and if they found gold, that is probably gone too. But Mr. Georgeson is still there and has developed

seed of grain, vegetables and fruit, so that Alaskan farms could support a population of 3,000,000 people and have a surplus for export.

Two strains of hard spring wheat have been developed, Chogot which has yielded 27 bushels to the acre on the experimental farm; and Romanous which yielded 30 bushels. These wheats grade as hard spring and exhaustive tests show that they make flour which is the peer of the best made in America. Eleven acres of white oats at the Fairbanks station yielded 778 bushels, an average of 70.8 bushels per acre, and barley has also done well, the seed having been brought from an altitude of 11,000 feet in Asia.

Mr. Georgeson says that there are 100,000 square miles of fine soil suitable for grain and other crops. Dairying is also a possibility and potatoes and strawberries have made wonderful records. The problem now is not food, but population.

AN ILLINOIS CO-OPERATIVE HOUSE

After its new house had been in operation for less than two years, the Tabor Co-operative Grain Company of Tabor, Ill., suffered a disastrous fire which completely demolished the elevator, although



PLANT OF THE TABOR (ILL.) CO-OPERATIVE GRAIN COMPANY

the concrete power house and grain drier, located 10 feet from the house, was not damaged.

Fortunately, there was very little grain in the elevator at the time of the fire, and as good insurance was carried, the company immediately made plans for rebuilding. This was about two years ago. The contract was awarded to Ballinger & McAllister of Bloomington, Ill. They used the foundation of the old house and erected on it a modern, cribbed, steel clad elevator that has met every requirement.

The new building is 36 x 48 feet on the ground plan and 55 feet high to the top of the bins, surmounted by a cupola 30 feet high. It is entirely covered with galvanized, corrugated steel, which thoroughly protects it from fire of external origin.

The equipment consists of two large elevator legs; a B. S. Constant Corn Sheller; a B. S. Constant Grain Cleaner and two chain feeders, together with all the necessary power transmitting machinery, steel spouting, etc.

The power house is in a separate building of concrete, equipped with two oil engines coupled together by means of friction clutch cut-off couplings. These supply the power for the entire plant. Above the power house there is a Hess Grain Drier.

The company has handled a large volume of business since the house was completed and every detail of the new elevator has given complete satisfaction.

INDIA this year will have a wheat crop of 375,884,000 bushels, or 134.4 per cent of the 1919 crop. Indian flaxseed will amount to 17,320,000 bushels, or 184.3 per cent of the 1919 crop. This is the June 24 estimate by the International Institute of Agriculture.

vator equipment made in years. The bins and scale hoppers are equipped with a large ventilator which carries off the dust as the grain is discharged, so that the entire plant is peculiarly free from dust.

The distributing spouts under the scales are a great improvement over those usually found. Instead of traveling on a single wheel on the suspended circular track and on casters on the floor, these spouts have two ball bearing wheels on the track and a large ball bearing wheel on the floor with the result that, literally, a touch of the finger will turn the heavy spout to the desired position. An idea of the distributing flexibility of the spouts can be gained from the illustration of the scale floor on Page 30. The scale in the immediate foreground can empty in any of the storage bins, shipping bins, cleaner, or conveyors whose numbers appear above it, a total of 47 different placements direct by spout.

The power is entirely electric, 150 Westinghouse motors supplying a total of 7,500 horsepower. Most of these motors are direct connected and the balance have Morse Silent Chain Drive Transmission, a total for the latter of 2,270 horsepower.

The loading out facilities of the house are as efficient as the other features. As the elevator is designed primarily for export business, vessel loading, naturally, is given the principal consideration. The loading gallery along the pier is 900 feet long and contains six 42-inch conveyors. Four of these can all load into one vessel or into different ones at the same time. There are about nine miles of Goodrich Conveyor Belting in the house, the largest single belting order ever placed. There are 69 conveyors in the plant, all mounted on Hyatt Roller Bearings which save about 10 per cent of the power required to operate them. All the conveyors have automatic take-ups arranged with a counter shaft and counter weight on the wall.

There is a marine leg for handling grain from bay boats, with a capacity of about 5,000 bushels per hour, equipped with Webster machinery and with its own scales and cleaner. There are four bins in the leg so that the grain here also may be held in store until the unit amount is accumulated for movement.

Up to the present time the elevator has handled 2,000 cars without a single complaint. The operation of the unloader has been inspected by representatives of a number of railroads, and none of them has found opportunity to criticize. During this time 20 ocean liners have been loaded out.

COST OF GROWING WHEAT IN KANSAS

The Kansas State Board of Agriculture recently issued a report which shows that Kansas farmers suffered a loss in producing the wheat crop of 1919. Figures compiled from reports to the Board of 2,040 wheat growers, showed that the cost per acre of growing wheat was \$25.20 for the whole state, while the return was only \$24.77, or a loss of 43 cents on every acre produced.

In the western division of the state the cost per acre was \$18.60 and the return per acre \$20.46, leaving a profit of \$1.89 per acre. In the central division the cost per acre was \$24.60, and the return \$23.08, or a loss of \$1.52 per acre. In the eastern division the cost per acre was \$33.75 and the return \$33.60, or a loss of 15 cents per acre. Of the total acreage of the state, 76 per cent showed a loss and 24 per cent gain.

In estimating the cost nothing was charged for depletion of the soil's fertility nor was anything allowed for "over-time" for long working days. The rate of interest charged on the use of capital invested in land, buildings and equipment for wheat was 5 per cent. Wages of farm hands was figured at \$55 per month and board. Compensation at \$2.50 per day was allowed the farmer for his services as manager, an average of 97 days per year. Allowances were made to cover repairs and replacements. One-third his house rent was charged against the wheat and the cost of seed and seeding abandoned acres.

Cairo Has Fine New Board of Trade

Egypt Dealers Now Occupying New Quarters—Exceptionally Fine Facilities for Business Embodied in the New Building

CAIRO'S grain men saw a dream of years realized on Saturday, June 5, when their new Board of Trade Building, formerly the Bon-durant Hospital, was thrown open to the public. The building was thronged with visitors who went from office to office on the various floors to inspect the quarters where a number of the grain firms of the city have their offices.

From top to bottom the building was open for

the men of the Weighing Department. Another inspection of the cars is made when placed on un-loading track. This record of seals and physical condition is made by Deputy Weighmaster. The shipper gets both reports.

The Board of Trade has tests made of all scales in use by members three or four times a year. An expert from Fairbanks, Morse & Co., or The Howe Scale Company making the test with the

are the Magee-Lynch Grain Company, the Halliday Elevator Company, the H. L. Halliday Milling Company, the H. S. Antrim Company, and the Cairo Grain Commission Company. James E. Bennett & Company and Samuel Hastings Company have branch offices. In addition to the grain firms, the Mobile & Ohio Railroad and the Cotton Belt Railroad have offices in the building.

The present officers of the Cairo Board of Trade are A. W. Lynch, president; Ira Hastings, vice-president; W. G. Cunningham, secretary; Louis H. Block, treasurer; W. S. Powell, chief inspector and weighmaster. Directors are: H. S. Antrim, Chas. Cunningham, H. E. Halliday, O. E. Hastings, Ira Hastings, E. G. Pink and John Thistlewood.



W. S. POWELL
Chief Inspector and Weighmaster

OFFICERS OF THE CAIRO BOARD OF TRADE
A. W. LYNCH
President

IRA HASTINGS
Vice-President

inspection and the numerous guests availed themselves of the opportunity to view the new home of the Cairo grain trade.

In the trading room after the inspection of the building had been completed, President A. W. Lynch, Board of Trade, welcomed the visitors, telling in a brief address the history of the Board of Trade, and how it had a vision of making Cairo a great grain market.

The new quarters of the Cairo Board of Trade are located on Seventh Street between Commercial and Washington Avenue. It is a four story brick and concrete fireproof building which was constructed for a hospital. This building was purchased and remodeled into an office building and the Cairo Board of Trade has a home that could not be duplicated for less than \$150,000.

The Cairo Board of Trade was organized in 1889, but it served more as a commercial club until 1914, when it became a distinctively grain organization, admitting none but grain men to its membership. As the business grew, and elevator after elevator was built, it was found necessary to establish an inspection department. This was accomplished in 1910 under the direction of W. S. Powell, who at that time organized a new department with two helpers.

The Inspection Department at present has two licensed inspectors as assistants and five samplers. The quarters of this department are located on the fourth floor, the inspection room having been originally built for the performance of surgical operations, with practically one-half of the windows facing north. It is considered one of the finest, if not the finest room for the inspection of grain in the country.

Adjoining the inspection room is a laboratory equipped with six Brown-Duvel Moisture Testers. The Inspection Department has all the latest improved apparatus recommended by the Department of Agriculture for the inspection of grain. Samples of all in-bound cars are kept on file for 14 days; samples of out-bound cars are kept for 30 days. This has been found to be a big advantage to the shipper, who if he has a complaint, can have the sample reviewed.

All cars are inspected by employees of the Weighing Department on arrival in the railroad yards, under which a record is made of the seals and any physical defects. Seals broken by the samplers are replaced with Cairo Board of Trade seals, and a record made of both seals broken and replaced. Cars found without seals are sealed by

Board of Trade test weights. Plans are now being made for joint inspection of all cars by the representative of the railroads and Board of Trade to comply with the Interstate Commerce Commission ruling in regard to claims. Mr. Powell is also chief weighmaster. Another important branch of

DEEP PLOWING WITHOUT RESULTS

A series of studies on the effect of deep plowing and dynamiting the subsoil have been concluded and the results announced by E. C. Chilcott and J. S. Cole of the U. S. Department of Agriculture. The experiments were conducted over a period of 66 years by different men at 12 different stations in the great plains region, an average of 5½ years at each station. From four to seven different crops were grown at every station each year.

Subsoil plowing of 12 to 14 inches was tried, and also loosening the soil with dynamite. These methods increase the cost of tillage about \$20 per acre. In order to justify their use the methods should give a large enough increase in yield to make up for the added cost which the subsoil plowing entails.

They do not do so. The average yields obtained by the investigators in their numerous experiments show that, as a rule, no increase in yield nor improvement in conditions may be expected. They do not tend to avoid injury to the crop by



NEW BOARD OF TRADE BUILDING, CAIRO, ILL.

the Cairo Board of Trade is the Rate Department of which Ray Williams is Manager. All matters regarding rates or traffic rules comes under his supervision.

The acquirement and occupancy of the new building was made possible and necessary by the volume of business handled by the local grain dealers. Cairo has become the largest grain sacking market in the country.

The grain firms located in the building at present

drought. All tests lead to the same conclusion, whether carried out in the semi-arid or under wet conditions.

CANADIAN estimate of June 1, shows 16,921,000 acres sown to wheat, as against 19,126,000 acres last year; oats 15,291,000 acres, compared with 14,952,000 in 1919; barley, 2,574,900 acres, as against 2,645,509 last year; hay and clover, 10,492,900, as against 10,595,383 in 1919.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

Official Paper of the Grain Dealers National Association and of the Illinois Grain Dealers Association

CHICAGO, ILL., JULY 15, 1920

GOVERNMENT ESTIMATE OF WHEAT COST

STATISTICS are gathered to serve a specific purpose, and can usually be used to whatever end the statistician wishes. Everyone in his right mind knows that the farmers, except in a few districts, have enjoyed a season of great prosperity. Of course the farmers will not admit it, unless you catch one alone out behind the barn where no one can overhear, but if argument were necessary the price of land would indicate the fact, to say nothing of the luxury sales in farming communities. And yet H. C. Taylor of the Department of Agriculture, after a survey of 481 farms declares that only 10 per cent of the farmers produced their wheat last year at less than \$1.50 per bushel; 25 per cent at less than \$1.80; 52 per cent at less than \$2.20; 80 per cent at less than \$3; and 90 per cent at less than \$3.80.

It is Professor Taylor's idea that the actual price of wheat should be high enough to cover the production cost of 80 per cent of the farmers, which would be around \$3 per bushel. As a matter of fact in recent months much of the wheat has brought that figure, but production cost had nothing to do with it, nor can it have. The statistics which Mr. Taylor made up from such a woefully inadequate and limited survey, have little or no meaning for the grain trade, although it ought to make some farmers sit up and take notice when they learn that wheat can be produced for \$1 per acre and less, even in these costly times.

But will the survey make the unsuccessful

farmers try to emulate the \$1 per bushel men by treating the seed, preparing their seed beds properly, and cutting at the right time? Probably not. If it has any effect at all it will encourage the attempt to make price by legislation; strengthen the farmers' faith in bureaucracy; and put more of his weight on the crutch of class privilege.

THE WHEAT PITS OPEN

WHEAT trading will have resumed when this issue is mailed. In fact Baltimore anticipated this action by accepting trades on June 25. On July 6 the Committee of Sixteen, representing the open grain exchanges, met at Chicago and recommended that trading start on July 15, beginning with December option. Milling and export trade will function on a cash basis, with opportunity for protection through the purchase and sale of December and deferred deliveries, although no trading beyond March, 1921, is to be permitted.

To further protect traders the various exchanges have amended their rules to permit wider deliveries on contracts. Minneapolis furnishes a typical example of these amendments which were voted upon on July 12:

1. That the contract grade of wheat for delivery on future contracts shall be No. 1 northern.
2. That No. 2 northern wheat shall be deliverable upon futures contracts at a discount of 3 cents per bushel under No. 1 northern wheat.
3. That No. 3 northern wheat shall be deliverable upon futures contracts at a discount of 8 cents per bushel under No. 1 northern wheat.
4. That the dark varieties of No. 1 northern, No. 2 northern and No. 3 northern wheat shall be deliverable upon futures contracts at a premium of 2 cents per bushel over the ordinary varieties of the same grades.
5. That No. 1 red spring wheat shall be deliverable upon futures contracts at a discount of 3 cents per bushel under No. 1 northern wheat. That No. 2 red spring wheat shall be deliverable upon futures contracts at a discount of 8 cents per bushels under No. 1 northern wheat.

Amendment No. 2.—Amend the contract grades of wheat as set forth in Amendment No. 1 above by adding the following paragraph:

That the following grades of winter wheat shall be deliverable upon futures contracts on the following basis:

No. 1 dark hard winter wheat at 3 cents under No. 1 northern wheat; No. 2 dark hard winter wheat at 3 cents under No. 2 northern wheat; No. 1 hard winter wheat at 5 cents under No. 1 northern wheat; No. 2 hard winter wheat at 5 cents under No. 2 northern wheat.

(This Amendment—No. 2—if approved by the Association, to be effective only in case above Amendment No. 1 is adopted by the Association.)

Each exchange will have its own rules and no attempt at exact uniformity will be made, but full protection to the trade will be afforded everywhere. This is as much as the exchanges can do and is sufficient.

JUGGLING THE GRADES

ELSEWHERE in this issue is the announcement that M. T. Cummings has formulated a new set of grades for grain and that the Grain Exchange of Lincoln, Neb., has endorsed it. We have not examined the proposed rules further than is possible with the data there contained and so are hardly in a

position to make judgment. Without attempting a criticism it occurs to us that Mr. Cummings's grades would permit of considerable more manipulation than is present under the system we are using. Perhaps Mr. Cummings has safeguarded the possibility of balancing a very high moisture content with qualities which would bring up the grade, but which, nevertheless, would leave the grain carrying a high risk. A very dry white corn, on the other hand, might contain so great a mixture as to make it useless for a white corn miller.

Mr. Cummings has submitted his grades to the Department of Agriculture and we will await with interest what Mr. Livingston has to say about them.

AGRICULTURAL FUNDS SHORT

CONGRESS cut about \$6,000,000 from the estimate submitted by the Department of Agriculture for its needs for the year beginning July 1. The Department will be badly crippled in much of its work as a consequence and will have to give up entirely some important projects. Secretary Meredith has outlined these restricted operations which appear elsewhere in this issue.

There is one ray of light, however, in the clouded prospect. The appropriation for the Bureau of Markets has been reduced by \$270,000. Direct marketing by parcel post and express will be discontinued, as will also the investigation of marketing and distribution of farm products in cities. Perhaps also the co-operative movement may be slowed up, although the Secretary does not so specify.

We would be the last to deny the constructive work which the Bureau of Markets has done in the past. Its Office of Grain Standardization alone would justify it, and there is much besides. But the Bureau has been used to bolster up theoretical ideas of marketing which have hurt legitimate and long established lines of trade, and we believe that this interference with private business is not and was never intended to be a function of government.

THE LOGICAL CONCLUSION

IT WOULD be interesting if the Department of Agriculture or a state university would define just where the co-operative movement should end. It is quite easy to make a beginning, but we sometimes wonder if they will be willing to finish it. There have been successful co-operative elevators; shall all country stations be operated on the co-operative plan? There have been successful co-operative organizations for selling milk and other dairy products, eggs, fruit, vegetables, wool, and livestock. Well, let us cut out the middleman entirely and have the farmers sell all their products themselves.

Co-operative organizations have also been successful in saving money for their constituents in purchases. Binder twine, building material, fence posts, implements, lime, cement, flour, potatoes, seed and feed have been handled on the co-operative basis. But why stop there? The profit on dry goods, drugs,

hardware, shoes, stationery, food, in fact everything the farmer uses, is said to be far too great. Let the co-operative store handle all of these things, and then whatever profit there may be will accrue to the farmer. One large plant and from 10 to 50 people could take care of it nicely in every center. All that remains of the country town is needless waste, an economic crime if the principle of co-operative organization is sound.

But this is not the end by any means. Why should the farmer organizations pay unholy profits to the manufacturer. Let them make all the materials that they use. Why waste the people's money in competitive endeavor? The logical conclusion of the co-operative movement seems to be a change in our Government from democracy to communism, or perhaps to socialism.

Does the Department of Agriculture believe in destroying competition? Does it wish to blot out the towns and villages of the agricultural states? This will be the result if the co-operative movement takes its natural course to the final stage. If the principle is sound then the logical result is to be desired. If it is not sound we are wasting a lot of time and money in chasing phantoms.

THE BALE TIE SHORTAGE

HAY men are greatly troubled over the shortage in wire bale ties. It is estimated that the supply of ties in view will not cover more than 60 per cent of the requirements. According to the Department of Agriculture about 24 per cent of the hay crop is baled. To tie 25,000,000 tons of hay requires a lot of wire, and where it is coming from dealers are at a loss to know.

The situation, however, is not quite so desperate as it might seem. Only a few years ago it was quite common practice in Ohio and California especially, to use sisal hay rope instead of metal ties. There is plenty of this rope available now and it can be used without much, if any, change in the ordinary type of division or parting block of the baler, for the openings are sufficiently large to accommodate the rope in most instances, and where not, the openings can be enlarged to a triangular or V shape. When the sisal hay rope is used, the baler manufacturers recommend the use of a wire needle 15 to 18 inches long, to which the rope can be threaded. The difficulties with rope ties are not great and we predict that a large part of the hay crop will be tied with sisal this year.

If the hay trade had no greater problem than this to contend with, the annual meeting could be shortened to half a day.

EXECUTIVE SESSION

NO GRAIN association in the country has recourse to that curiosity arousing function known as the "executive session." All meetings are open and above board as they should be, and every discussion is free for the whole world to hear. Grain conventions are above suspicion. But allied bodies cannot say as much. One or two millers' associations still have recourse to closed doors; the Feed Manufacturers Association spoiled a

splendid two-day meeting with a secret tribunal on the last afternoon; and the Seed Trade Association was held very largely in the dark, so far as the public is concerned.

To be sure most executive sessions are as innocent as an old maid aunt, but even aunt cannot frequent dark alleys or hold clandestine meetings without being subject for gossip. What is the use in laying an association open to suspicion of manipulating prices, making secret agreements, and other evils which the public press delight in laying at the door of every strong organization whenever there is the least chance? One of the principal features of all association work is in creating good will for the trade. This can best be done when the utmost publicity is given to all meetings, and when no suspicion or doubt is possible in the conduct of its affairs.

AN AFFAIR OF IMPORTANCE

WHILE the grain trade has plenty of specific problems of its own to contend with at present, we should not lose sight of some of the larger issues which affect the entire nation. Don't let the trees obstruct your view of the forest.

One of the most important of these economic problems was presented to the Indiana Grain Dealers by F. G. Horner, who knows what he wants to say and how to say it forcefully and well. He talked of the tendency toward bureaucratic government and its direct effect on the grain trade in the encouragement it gives to co-operative markets.

We commend a careful reading of Mr. Horner's address and some real thought on this important subject. While America in some respects is more free just now from Government control than European nations, the tendency toward permanent bureaucracy and government by commission is stronger here than abroad. For all our ostentation of democracy and freedom, we are becoming a nation of little souls, afraid to trust our individual strength when the sea of natural law becomes turbulent; too ready to hoist our ragged shirt to an oar to beckon the Government to our aid. When pork chops get too high we must have a commission to regulate the price; if cars get scarce a cry goes up for Government ownership of railroads. Apparently we have lost faith in the inherent genius of America. Let's get it back.

HIGH COST OF CARELESSNESS

AT THE annual meeting of freight claim agents, Section 7 of the American Railway Association, last month at Atlantic City, it developed that loss and damage claims in 1919 on Class 1 roads amounted to \$104,000,000. Just how much of that was for grain claims was not stated, but it is a considerable proportion. A committee had been studying the subject and offered suggestions for remedy, but the convention was not satisfied and referred to the incoming committee for further study and recommendation. At the same time the Industrial Traffic League, meeting in Philadelphia, appointed a sub-committee

to act with the freight claim agents in deciding upon measures to reduce this frightful loss.

The subject is one which the grain trade could devote time to advantageously. We spend a great deal on the subject of collecting claims. How about preventing them? Losses occur very often after a shipper has exhausted every means to secure the safety of his shipment, but in some cases losses on grain are due to carelessness or ignorance or inefficiency. There are some reported losses which are not losses at all, but scale defects or inaccuracies in recording weights. Not every shipping spout is grain tight, neither is every car carefully inspected and properly coopered before loading. Many shippers do not even know how to make or fasten a grain door properly. So, while we like to put the onus of all losses on the carriers, just between ourselves we can admit that we, and not they, are sometimes to blame. There is room then, in the trade, for a little missionary work in the field of preventing losses.

RATE HEARINGS ENDED

THE Interstate Commerce Commission closed the hearings on the application for increased rates and the decision will be published within the next two or three weeks, probably, to take effect September 1. The roads are asking for an addition of \$1,017,000,000 to their income, which would make about 30 per cent increase in rates. In all likelihood this will be granted, almost if not quite, in its entirety.

But increased rates will not end the troubles of the road. If the full capacity of the car shops were engaged, which it is not, it would take some years to get on a normal car supply basis. Motive power is in the same case, and, as R. C. Fulbright told the Commission at the hearing, there are three matters which remain for the roads to handle: The labor problem must be settled; a market for securities must be found; and the tax discrimination against railroad securities must be lifted.

Railroad bonds of unquestioned security are now on the market at a price to yield 10¾ per cent, and still it is difficult to dispose of them. Taxes and supertaxes reduce their ultimate yield beyond competition with tax-free securities like Government and municipal bonds. Revenue will be of little benefit unless the borrowing power of the roads is improved, for the revenue will not take care of the enormous betterment budget. We are not out of the woods yet on the transportation question, and we will need all the patience we can muster.

ODD MOMENTS

NATHANIEL HAWTHORN won undying fame by occupying his spare time when he was collector of the port of Salem, Mass. Paul Darde of France was a shepherd, but he occupied his idle moments while watching his sheep in modeling in clay, dug from the bank of a stream nearby, and now he is hailed as a second Rodin. David Oliver

was a blacksmith, and between shoeing horses and mending farm implements he worked on a new principle to improve the plows. Mr. Sears was a railroad man, sold watches by mail, and founded the firm of Sears, Roebuck & Co.

The elevator operator who handles only grain has enough time on his hands through the course of a year to revolutionize his world if he would but set his mind on it. His world—not *the* world. We have plenty of bolshevist nuts working on *the* world revolution without having grain dealers waste their time on it. But in his own little world almost everyone could do some revolting to advantage. Just in the matter of dollars and cents there are occasional dealers who could bear up under a slight increase in income.

Those who have tried, have proved conclusively that spare time can be made to pay good dividends when occupied with selling side lines to farmers. It not only pays for itself but undoubtedly increases the volume of the grain business. A farmer, or anyone else brings what he has to the place he can get what he wants. Many dealers exchange hundreds of dollars worth of commodities for grain, balancing a credit and debit account one against the other. But do not buy grain for cash and sell your stock of sidelines on credit. Use acceptances or let the farmer utilize his credit with the bank and pay for what he buys. Do not be the goat even in your spare time.

EDITORIAL MENTION

Indiana farmers declare they will hold their wheat for \$3 per bushel. It is hoped they have good rat proof bins and plenty of money.

Black rust in the Northwest has a good start, but damage to date is slight. The weather in the next three weeks will determine the losses.

Wheat growers of the Pacific Northwest are organizing to market their own crops. We hope the farmers make enough on the transaction to pay the organizers.

The National Hay Association is putting its house in order for Government grades on hay which will probably be the next. Hay inspection is in need of housecleaning.

Germany has fixed minimum prices on all its grain crops. Judging from prices travelers have to pay for foodstuffs in Germany, there is not much danger of stifling agriculture with low prices.

The crop prospects are remarkable in view of the prevalence of bugs and the discount they necessitated. Hessian fly, chinch bugs, army worms and rust are more in evidence than they have been for some years, and yet the Government report of July 9, shows a prospect of 518,000,000 bushels of winter

wheat; 291,000,000 bushels spring wheat; 2,779,000,000 bushels of corn; 1,322,000,000 bushels of oats; 193,000,000 bushels of barley; 82,000,000 bushels of rye; and 84,800,000 tons of tame hay.

Secretary of Agriculture, E. T. Meredith, advises farmers to study foreign markets if he wishes to get a true indication of the value of his products at home. This is a simple subject which the farmer might take up while he is waiting for the garage man to fill his gasoline tank.

On July 1, the level of prices paid producers for our principal crops was 20.6 per cent higher than a year ago, 37 per cent higher than two years ago and 102.5 per cent higher than the 10-year average 1910-1919. During the 10 years the value of meat animals only increased 39 per cent.

The Enabling Bill, up for passage in the Canadian Legislature, provides for further control of wheat should it be necessary as the Wheat Board goes out of existence with the crop year. The Government has given assurance that the Enabling Act will not be used except in case of emergency.

When the Chicago Board of Trade resumed trading in wheat the little rye and barley pit was used. This indicates the volume of business expected. Margins on wheat from 10 cents to \$1 per bushel are being asked, so there is not much inducement for those who merely wish to gamble.

Henry L. Goemann advises against signing a lease on right of way or a side track agreement unless there is a clause to the effect that the terms will be binding only if and when sustained by the Interstate Commerce Commission. Do not trust to a verbal agreement to that effect, have it in the lease.

Grain dealers in many sections are arguing priority rulings in use of cars, with the accent on their own needs. The grain trade needs cars all right, but so does every other industry and the principle of priorities is wrong, as the grain trade would be the first to acknowledge if someone else were the beneficiary.

A plan is under way whereby you can insure yourself against loss through error in transmitting a telegram by a telegraph company, by paying a premium of 1 cent for each \$500 of liability assumed by the company. This is a good scheme, for a little insurance would tend to a great deal more care in transmitting the message.

The Supreme Court has decided the North Dakota's socialistic laws are constitutional and Judge Amidon of the U. S. District Court has upheld the Grain Inspection Law, so the state can go ahead with its experiments and no one will be the worse but North Dakota taxpayers. In fact there are a lot of people in the country who need to be shown that Government cannot run public or private utilities as efficiently as private interests can.

The state, no doubt, will make a good appearance for a time by juggling expense accounts, but ultimately the tax burden will tell the tale.

What will it cost to handle grain through an elevator this year? Eight cents, the classic Government figure, will not cover it by a long margin. Terminal market charges have increased in proportion to your own expenses, so bear them in mind.

The Cereal Enforcement Division of the Grain Corporation, Alfred Brandeis, chief, has closed its offices and there will be no more auditing of mill and elevator accounts by this agency which made so much trouble two years ago. Our blessings slowly accumulate.

The hearings on the Great Lakes-St. Lawrence Waterway project brought out some strong testimony in favor of the plan. No one needs to be convinced of the need of more transportation facilities. New York, however, believes that all transportation should converge at that port. This seems to be the chief stumbling block in the way of the project.

The Grain Corporation has reduced its capital stock by \$350,000,000, that amount having been returned to the U. S. Treasury. The remaining \$150,000,000, and whatever profit there may be, will be returned when the affairs of the Corporation are closed up. It must have been a terrific shock to the Treasury to have any public money returned. But then, the Grain Corporation made something of a record throughout its existence.

A generally bearish sentiment is prevailing over the country, and when any line of thought is so general it is a pretty good indication of how things are going. Sentiment, after all, is a result of conditions, although everybody may not be able to state the conditions specifically. So far as the wheat market is concerned, and that will resume its dominating influence again now that the market is open, the supply and demand situation indicates a generous supply for home consumption. We will have an exportable surplus of close to 250,000,000 bushels; Canada's prospects are excellent and may develop a 150,000,000-bushel surplus; India will have some to spare, perhaps 50,000,000 bushels; France with her colonies is practically out of the market, having enough to go on; Argentina and Australia are just beginning their crops, neither having a surplus of old wheat. If trade is resumed in eastern Europe supply and demand will nearly balance as Russia, Roumania and Bulgaria will have some to spare. England, Spain, Germany, Austria, Hungary and Poland will have to import wheat in considerable quantities, but the exchange situation will promote a general use of substitutes whenever possible. On the other hand local transportation and financial crises may effect values temporarily and cause erratic markets at any time. The immediate course of grain prices is hard to forecast, but the future is certainly bearish.



H. C. GAMAGE
Kansas City

NEWS OF THE TERMINAL MARKETS



S. M. RATCLIFFE
Buffalo

NEW BOARD OF DIRECTORS

The Meridian Board of Trade, Meridian, Miss., recently elected the following Board of Directors: O. L. McKay, T. J. Bolster, L. G. Gresham, T. J. Chidlow, James Bozeman, Leo Wellhouse and L. Threefoot. L. Katz was appointed grain inspector for the Board.

A WORD OF CAUTION

Pope and Eckhardt Company of Chicago, say in July letter: "Wheat trading in regular future deliveries—December to March (at the start) is likely to be resumed in the larger markets on July 15. New York reports some business to exporters; no business here for shipment. 'To arrive' bids were advanced for nearby shipment. It will be well in calculating on purchases at the stations and sales 'to arrive,' to keep in mind probable advances in freight rates that will be effective some time in the near future."

GRAIN AND FEED CLUB OF PHILADELPHIA

A number of grain and feed dealers of Philadelphia, Pa., members of the Commercial Exchange, met recently and organized the Grain and Feed Club of Philadelphia. The object of the association is to promote a better relationship among dealers of Philadelphia and surrounding territory.

Officers of the new organization are as follows: F. M. Rosenkrans, of Rosenkrans-Snyder Company, president; A. F. Gruber, of the E. E. Delp Grain Company, vice-president; S. J. Gibby, of Dougherty-MacHenry Company, secretary; J. K. Scattergood, of S. F. Scattergood & Co., treasurer.

KANSAS CITY TAX ORDINANCE HITS GRAIN MEN

Grain dealers, brokers and elevator men of Kansas City are protesting the grain taxes in a general tax ordinance passed by the Council of Kansas City on July 3. E. D. Bigelow, secretary of the Board of Trade, states that the Board has as yet taken no official action in regard to the tax. A proposal of \$250 per year was made for the elevator tax but a graduated scale was adopted and passed. Elevators of up to 50,000 bushels capacity have a flat yearly rate of \$50; elevators of 50,000 to 100,000 bushels, \$75; 100,000 to 200,000 bushels, \$150; 200,000 to 500,000 bushels capacity, \$250, and more than 500,000 bushels a flat rate of \$350. A grain brokers' tax of \$200 a year, flat, was also proposed and incorporated in the ordinance.

The grain business was placed in a food classification making the tax on dealers 25 cents a thousand dollars. At these rates the grain men contend that the grain business will yield between \$75,000 and \$80,000 to the city. The tax on dealers out of the food classification is 75 cents on the \$1,000.

LIBERAL RECEIPTS AT ST. LOUIS

We have had a fairly liberal run of wheat and it is considerably higher; all classes of buyers were in the market, especially for the new wheat and the old hard wheat. The constant reports of black rust from the Northwest are causing an unsettled feeling in this market. We look for a steady to a strong market right along on this wheat and think the demand will probably exceed the supply on account of the car situation.

Receipts of corn have been very liberal for the past 30 days and the demand has been fair. For the last three or four days, however, there has been evidence that this demand is pretty well supplied.

We think with any increase from present receipts the market will fall off sharply, but if the receipts drop off we anticipate some advance in corn.

Those old oats are at a big premium and ought to be shipped at once. There is no use of holding on to them any longer, for the new crop is coming in soon and in some places they have started to ship them. The old should be moved as fast as cars can be had.

There is a big demand for rye and all classes of millers, shippers and exporters are buying it, or are trying to buy it, so rye will work somewhat higher.—*Elmore-Schultz Grain Company, St. Louis, Mo., in letter of July 12.*

FRED E. POND

The great grain public has for the most part seen Fred E. Pond, the genial secretary of the Buffalo Corn Exchange, only at large. For, sec-



SECRETARY POND AT HOME

ond only perhaps to Chief Culver of Toledo, he has probably been the most constant attendant at Western grain dealers meetings of all delegates officially connected with a board of trade. And in times past there was need of such representation. Grain dealers of Ohio, Illinois or Indiana frequently desired to know something about the working of the grain inspection and weighing departments of Buffalo, Philadelphia or Baltimore as the case might be. And when Buffalo was placed upon the carpet, Secretary Pond responded to such purpose that the knotty problems were clarified and the trade satisfied as to the integrity and watchfulness of shippers' interests in that market.

In our illustration Secretary Pond is shown, for the first time we believe, taken in captivity. The sign on the door reads: "The Corn Exchange, Secretary's Office." This was printed on the door some 15 years ago when Mr. Pond assumed office and it may be the name of the secretary was not given for economical reasons, as, should a change be made, it would be necessary to obliterate a name and paint a new one on the door. Now, everybody from Nome to Palm Beach knows who the secretary of the Buffalo Corn Exchange is, so the door remains with its first formal and only declaration.

Secretary Pond has seen the Buffalo market grow to very broad proportions during the past 15 years

and has contributed to its growth. The picture shows him to be still young and also that the weight of his responsibilities have not crushed him. Credit must be given to Mercer County, Illinois, as his birth place. In a recent interview he stated that Buffalo is the best grain market in the country; that it gives best weights, best inspection service, with the best elevator equipment for handling grain, and unexcelled railroad facilities both in and out of the terminal. He also admitted being the best secretary now handling exchange affairs in this or any other country.

NEW WHEAT AT INDIANAPOLIS

Receipts here at Indianapolis continue liberal, but with the break in the market the trade holds up remarkably well. We have been getting more than the Chicago or the eastern prices on our grain for some time, and all receipts are cleaned up readily as they are offered. Our market here is in good shape to handle the grain as it arrives.

The first new wheat in today, testing 61 pounds No. 1 wheat, and sold at \$2.86 Illinois points. The demand is excellent for the new wheat, and we believe that any shipments worked this way will meet with favorable prices.—*P. M. Gale Grain Company, Indianapolis, Ind., in letter of July 12.*

NEED IMPROVED RAILROAD SERVICE

In a discussion of the corn situation, Simons, Day & Co., of Chicago, say in recent market letter: "The troubles of the present world are deep seated. Modern civilization is slow to adjust itself to changed conditions, and it is too evident that transportation facilities are obstructing the return to normal. Increased freight rates will mean improved railroad service, hence, larger receipts. The evolution of coming developments will be slow, but with the advent of greater production and better shipping facilities, prices are bound to adjust themselves eventually. Crop and weather have been favorable and prospects for another abundant yield of corn are encouraging."

PROPOSED FLOUR AND FEED INSPECTION AT KANSAS CITY

Flour and feed manufacturers and dealers, members of the Kansas City Flour and Feed Club, about 25 in number, have outlined an inspection system and are seeking to secure an inspector to take charge of the inspection of flour and feed in that market. It is not expected that the inspection will start until about September. The Board of Trade now maintains an inspector but his duties are so numerous that little attention has been given to flour and feed. The co-operation of the Board will be solicited in carrying out the outlined plans. A rigid flour and feed inspection system would doubtless stimulate the Kansas City market by assuring standard grades in those products.

SLIGHT INCREASE IN HANDLING CHARGES

Terminal charges at Toledo will be slightly increased for this season. Elevation charge on all grains will be one cent per bushel which pays for the first 10 days storage but four days are free to the buyer. Inspection charge will be \$1.75 for straight cars and \$3 for bulkheads. Blowing, cooling or running grain to help condition will cost half cent per bushel for each handling. Loading charge on wheat, corn and rye remains at \$1 per car; but charge for loading oats and barley has been increased to \$1.50 per car. Commission charge for

handling wheat has been increased to three-quarters of one per cent. Storage will be at the rate of one-twentieth of a cent per bushel a day. At present prices charges here for handling wheat on consignment amount to about 2½ cents a bushel, corn about 1¾ cents, and oats 1¼ cents.—C. A. King & Co., Toledo, Ohio. From Special Market Report of July 8.

OLD TIMERS OF THE BOSTON MARKET

BY L. C. BREED

Among the treasured keepsakes of the writer, is the photograph which is reproduced for publication herewith. The majority of the men who comprise this group, are flour, grain and feed commission merchants, but it also includes several hay, produce and provision dealers. The trading room shown in the picture, is the old quarters of the Boston Chamber of Commerce in the Quincy Market Build-



MEMBERS OF THE BOSTON CHAMBER OF COMMERCE THIRTY-TWO YEARS AGO

ing, and adjoining it were the executive offices. The date, as shown in the picture, is July 31, 1888, and the time 1:20 o'clock p. m. There were upwards of 100 members present on the occasion, but that was hardly an average number, and many members must have been out of the building for one reason or another. The writer has attempted to furnish a list of these men who are still alive. In this work he was assisted by B. J. Rothwell for flour, Henry Jennings for grain and C. M. Cox for the feed men. While the majority of these men, as will be seen, have passed away during the period of 32 years which have elapsed since the photograph was taken, many of the remaining members are still engaged in business in Boston, or in the cities and towns of which they are residents.

The living members represented in the illustration are as follows: Albion H. Brown, Leroy S. Brown, H. L. Buss, L. C. Breed, Charles Campbell, Bernard Corr, Charles M. Cox, J. E. Edmunds, R. H. Chamberlain, Louis W. DePass, Jacob Fottler, Stacy Hall, Chas. Houghton, Henry Jennings, Frank E. Knight, Geo. H. Knowles, James H. Knowles, Hale Knight, Wm. S. Leavitt, Eugene McDonald, H. B. Moore, Frank A. Noyes, Wm. H. Pearson, Fred Ramseyer, R. D. Richardson, Arthur L. Robinson, B. J. Rothwell, F. H. Ruggles, J. Walter Sanborn, Chas. H. Stone, A. K. Tapper, Charles C. Upham, Chas. H. Wade, Horace S. Wade, Harry Wade, Joseph S. Williams, Frank W. Wise.

RESUMING WHEAT TRADING AT CHICAGO

The Directors of the Chicago Board of Trade at their regular meeting on July 13, decided by resolution that the tax to be paid by the seller of a deferred acceptance contract calling for wheat should be offset by an increase in the price of the offers, both daily and weekly, of 50 cents per 1,000 bushels, to take effect July 15, 1920.

"The future market in wheat is being re-established for the benefit of producers, consumers and

handlers of cash grain," says a Chicago authority. "Speculative trade should therefore be encouraged, it is declared, only to the extent necessary to furnish a stabilizing influence."

Since the Lever Act is still in force, it will be necessary to continue the supervision of contracts for future delivery under the provisions of that law. The Directors of the Chicago Board of Trade have given the executive officers full power to order curtailments or readjustments whenever the public welfare or the best interests of the association require.

MARKET SITUATION AT PEORIA

Receipts of corn at Peoria have been fair and prices have been fluctuating, keeping in line with values in other markets. There continues to be an active industrial demand, but business for shipment has been small, as shippers are still reluctant about

light and advices of consignments have also gotten down to small proportions. We do not look for much of a movement of new oats this month as oats were put in the ground late, and even if crop is ready to move this month, scarcity of cars will interfere with movement.—Mueller Grain Company, Peoria, Ill., in letter of July 12.

BLACK RUST SERIOUS IN NORTHWEST

Our wheat market has been strong and most grades of wheat were up about five cents today (July 12). Wheat is now moving forward in price under the stimulus of black rust reports and while we cannot say definitely yet serious damage has resulted from the prevalence of black rust, such danger is imminent. With the right kind of rust weather the next few days, we are going to get very bad reports.

The writer has watched black rust for many years and has never seen a year yet when it has gotten the start it has this year, but what it really developed into something serious. It is always the unexpected that happens, however, and we may possibly escape without much damage this year, although the chances are against it.

Our corn market has been a bit draggy. There is too much hot corn and too many cars of corn which are cool getting hot, so we have not much of a corn market. The demand for cash oats is none too keen. Old oats are at a tremendous premium over the new crop futures so we can have not a great demand for oats at present.—Godfrey Grain Company, Minneapolis, Minn., in letter of July 12.

ATCHISON BOARD HOLDS ANNUAL MEETING

The Sixth Annual Meeting of the Atchison Board of Trade was held in the Masonic Temple Building at Atchison on July 6. F. H. Mangelsdorf, of the Mangelsdorf Seed Company, was elected to the presidency, succeeding J. W. Blair, who has held that office for two terms. C. H. Blanke, of the Blair Elevator Corporation, was elected to the vice-presidency and the following members were chosen as directors for the ensuing fiscal year: C. M. Sheehan, J. W. Blair, W. S. Washer and David Lukens. Under the by-laws of the organization the president and vice-president, the secretary and treasurer serve as ex-officio members of the Board of Directors.

Secretary R. T. Willette rendered his annual report, which showed a healthy growth by the Board and excellent general condition. The report said in part:

"Your secretary is pleased to report that since February 26, 1920, 14 new memberships have been taken out in our exchange, increasing the memberships from 38 to a total of 52.

"Three new grain firms have opened offices in

BIRTHDAY GREETINGS



Your birthday, we believe
Uncle Sam,
Best wishes please receive
From J. F. Zahm.
We're glad to serve in any way
In time of peace or battle's fray—
We're at your service night or day,
Uncle Sam.

And if a little grain you need,
Uncle Sam,
Or flour, or meal, or clover seed,
Beef or ham,
The only thing you have to do
To get the shipment promptly through
Is simply send your order to
J. F. Zahm.

—J. F. Zahm & Co. to Uncle Sam, on his 144th Birthday.

Atchison since the first of the year, namely Dilts & Morgan, Moore-Lawless and the Fuller Grain Companies. Each of these firms are substantial grain commission merchants and are valuable adjuncts to our exchange, and they have and will take an active interest in the buying and selling of grain in our market. With the addition which the Blair Milling Company is making to their flour milling capacity, practically 200 per cent or an additional 1200 barrels of flour daily, and the capacity which the new mill of the Atchison Mills Corporation will have, namely approximately 2200 barrels, and improvements which the Lukens Milling Company have made in the last year's time will result in adding further importance to Atchison's milling industry. It follows, therefore, that our exchange will benefit materially by these things.

"I am advised by the Blair Elevator Corporation that they have not abandoned, by any means, their plan of adding to their grain storage capacity here but that when conditions are opportune they expect to build that 1,000,000-bushel elevator.

"The cost of Treasury memberships, by action of the members, was advanced as follows: Numbers 53 to 55 inclusive from \$300.00 to \$1,000.00, 56 to 58 inclusive, \$500.00 to \$2,000.00 and from 59 to 60 inclusive from \$500.00 to \$3,000.00, and after the issuance of Certificate No. 60 any subsequent certificate shall not be issued for less than \$5,000.00. This action was taken among other things in order to place Atchison on a basis comparable with other grain exchanges of like importance on the Missouri River and elsewhere.

"During the fiscal year just closed the non-resident members were assessed annual dues of \$15 each, the heavy expense of maintaining the exchange fell upon the active resident members of the Board. While the exchange was being placed firmly upon its feet it was felt that the resident members could very well bear this burden, but now that the exchange is firmly intrenched and its success assured, coupled with the fact that membership values in the Board has been greatly enhanced it is recommended by the Board of Directors that each and every membership be assessed annual dues of \$35 for the ensuing year."

CHANGES IN MEMBERSHIP

Chicago.—Memberships on the Board of Trade were granted to the following: W. J. Mensendieck, Alphens Beane, Henry Holt, Carl Timmerman, Lee H. Wolvin. The memberships of the following have been transferred: Fred C. Sawyer, Benj. S. Lang, J. Herbert Ware, J. R. LeVally and H. G. Campbell. Reported by Secretary John R. Mauff.

Duluth.—Harry C. Olson, R. W. Sedell, A. Hansen and F. M. Crosby have been elected to membership on the Board of Trade. W. A. Anderson and John Washburn have withdrawn their memberships. Reported by Secretary Chas. F. MacDonald.

Milwaukee.—New members in the Chamber of Commerce are: Jas. P. Hessburg, manager Milwaukee office Armour Grain Company; H. D. Pheatt and F. E. Coffin. Transferred memberships are: George A. Schroeder, freight bureau manager, Milwaukee Chamber of Commerce; R. B. Snyder, deceased; R. F. Zimdars. Reported by Secretary H. A. Plumb.

Toledo.—C. H. Kruse was admitted to membership in the Produce Exchange on transfer from C. M. Whitney. Mr. Kruse is connected with E. W. Wagner & Co. Reported by Secretary A. Gassaway.

TERMINAL NOTES

The Kansas City office of the United States Grain Corporation vacated its offices in the Elmhurst Building on July 1.

The Mitchell Company on July 1 succeeded the Randell, Gee & Mitchell Company of Minneapolis, Duluth and Winnipeg.

Dan McKinnon, manager of the Minneapolis office of Thompson & McKinnon of Chicago, was recently admitted to partnership in the firm.

John De Molet of the De Molet Grain Company of Cincinnati, Ohio, spent the first part of July motoring with his family in the East. New York,

Atlantic City and other points were visited. He returned in time to attend the National Hay Association convention.

White Bros., wholesale grain and hay dealers of Scotts, Mich., have opened a branch at Dowagiac, Mich., with Charles R. White in charge.

Owing to the death of the senior partner, the firm of Lefebvre & Mahon of Bowick Station, Quebec, Canada, passed out of existence on July 1.

Howard J. Smith has succeeded the Smith-Jenkins Grain Corporation at Buffalo, N. Y. Offices are in Room 21 Chamber of Commerce Building.

The Fitzgerald Bros. Company of Cincinnati, Ohio, handled the first car of new hay from Illinois on that market. It arrived July 12 and sold at \$33.

The first car of new wheat reached Kansas City on July 1, from Braman, Okla. It graded No. 2 mixed, testing 59 pounds with 13 per cent moisture content.

The Cleveland Grain & Milling Company of Cleveland, Ohio, has consolidated its offices in the B. of L. E. Building and the Cleveland mill is now in operation.

Harry Johnson, who was for many years traffic manager of the Union Elevator Company of Cleveland, Ohio, has left that position to engage in railroad work.

Henry S. Sawrie Company has been formed to engage in the grain, flour and feed business at Nashville, Tenn. Mr. Sawrie was formerly of W. S. Sawrie & Sons.

Jesse C. Stewart Company has purchased of D. G. Stewart the Iron City Elevator at Pittsburgh, Pa., and has engaged in the general grain business. The consideration was \$90,000.

Fred Wilkinson, who for 15 years has been engaged as traffic manager of the Paddock-Hodge Company, of Toledo, Ohio, has joined the forces of the Rice Grain Company.

Paul Barnes, secretary of the Young Grain Company of Toledo, Ohio, for the past six years has resigned from that company to take up work with the Toledo Grain & Milling Company.

Max T. Moritz of C. Moritz & Co., Hastings, Neb., recently became a member of the Kansas City Board of Trade and C. Moritz & Co. plan to open an office in Kansas City in the near future.

C. E. Lindner, manager of the hay and grain business of Dorsel Grain Company, of Cincinnati, Ohio, recently returned from a two weeks' vacation spent with his family in Chicago and vicinity.

H. C. Dickey, C. F. Deaver and C. W. Lane of Minneapolis, Minn., are incorporators of the Peavey Company of Minneapolis, a grain elevator organization with \$100,000 authorized capital stock.

Charles Henry Kruse has been appointed manager of the E. W. Wagner & Co., wire on the floor of the Toledo Produce Exchange. Mr. Kruse has been elected to membership in the Exchange.

J. Carroll Fahey, member of the grain receiving and exporting firm of John T. Fahey & Co. of Baltimore, Md., returned home early in July from visiting a number of large western grain exchanges.

The Becker-Barrett-Lockerly Company has been organized at Minneapolis, Minn., to carry on a general grain business. The principals in the firm are C. R. Lockerly, E. F. Barrett and J. B. Becker.

The Park-Richter Grain Company was organized at Salina, Kan., on July 1 to conduct a general commission business in wheat and coarse grains, in addition to handling millfeed on a brokerage basis.

The grain exporting firm of C. H. Vannatter & Co. of Toronto, Ont., has dissolved partnership. C. R. Vannatter has bought the interest of his partner, A. R. Roberts, and will continue the business alone.

W. L. Frank of the United States Department of Agriculture spent a day recently in the St. Louis market, enroute to Washington, D. C., on his return from the wheat fields of Texas and Oklahoma where he has been making a special investigation and survey of the inter-mixture of two or more

varieties of wheat growing in the same field. In grading such wheat classification is frequently difficult and at some terminal markets is quite a problem for the Inspection Departments.

E. M. Larsen has been elected president of Henry Rang Company, Chicago, to succeed the late Henry Rang. Hugo Stolley is vice-president of the company; V. H. Rang, secretary, and J. J. Corbett has been elected treasurer.

H. M. Strauss & Co., of Cleveland, Ohio, moved July 1 from the Garfield Building, where they have conducted their grain and hay business for the past 12 years, to the commodious offices on the twelfth floor of the Guardian Safety & Trust Building.

P. L. Jacobson, secretary of the Oklahoma Terminal Elevators Company, Oklahoma City, spent several days recently visiting A. L. Jacobson of The Atchison Mills Corporation at Atchison, Kan. Mr. Jacobson reports very favorable for the Oklahoma crop.

E. Steen & Bro., grain and hay merchants of Baltimore, Md., have purchased the large elevator and warehouse they have been operating for some time past located at Warner Street and the water front. The elevator has a capacity of 100,000 bushels.

Rosenbaum Brothers, grain merchants of Chicago, have leased the National Elevator at Chicago, located on the Chicago & Alton Railroad. They will use this house more particularly for the handling of wheat and are in the market at all times for this grain.

Ambrose A. Bender, of the feed and grain firm of A. Bender of Cincinnati, Ohio, was joined in marriage June 28 to Miss Helen Ficke at Erlanger, Ky. The newly married couple returned from their honeymoon July 5 and are now at home at Norwood, Ohio.

The D. O. Cross Company of Cincinnati, Ohio, is enlarging the scope of their business to include a general consignment business in grain as well as hay. F. C. Palmer is now secretary of the company and with Jack Gartner are sole owners of the business, Mr. Cross having sold his interest a few months ago.

Laural Duval, Federal Grain Supervisor, of New York, spent a part of July in St. Louis. He is in charge of the Federal Grain Supervision Division including Boston, New York, Philadelphia and Baltimore and is especially interested in the inspection and grading of grain moving from markets in this section to eastern ports for export.

Had there been a prize offered for the solution of the puzzle, we should have won it. It was sent out by J. F. Zahm & Co. of Toledo and consisted of five cards of various shapes to be so arranged as to make the letter Z. The distinctive features of course were: "Why not consign all the time?" and "Send it to Zahm, Toledo."

James A. Patten of Bartlett Frazier & Co., Chicago, has resigned as trustee of the Northwestern University at Evanston, Ill., and has been succeeded by Oliver T. Wilson. Mr. Patten has been trustee of the University for 15 years and during that time has given the institution \$1,500,000. Mr. Patten explains that he is reducing his various interests in order to have more time for rest and recreation.

On July 1 C. A. May of Minneapolis, Minn., went with the well-known Chicago grain firm of J. H. Dole & Co., and will represent them as traveling solicitor in Minnesota, South Dakota, extreme northern Iowa and western Wisconsin. Mr. May is well and favorably known to shippers in that territory, as he has for the past eight years traveled for Hallet & Carcy Company of Minneapolis, and his many friends in these states, as well as those of J. H. Dole & Co., will welcome him in his new position. L. L. Drury, who for many years past has represented J. H. Dole & Co., is taking an interest in an established business in Minneapolis, therefore cannot longer represent his old firm in the Northwest.

Robert R. Saunders, federal grain supervisor in charge of the New Orleans supervision district, re-

cently completed a series of grain grades demonstration meetings at local points in central and southern Illinois. Farmers and country shippers showed considerable interest in these demonstrations, but at some of the meetings the attendance was limited by the pressure of farm work. For many years "Bob" was a resident of St. Louis and occasionally "between stands" he visited 'Change, pleasantly renewing his wide acquaintanceship with local grain trade.

NEW SYSTEM OF GRADING PROPOSED

A new system of grading grain has been devised by M. T. Cummings of Lincoln, Neb., and has been endorsed by the Lincoln Grain Exchange. The system is designed to supplant the present Federal system of inspection. Following its endorsement by the exchange the plan has been sent to Washington for the consideration and approval of the United States Department of Agriculture.

The new system of inspection as outlined by Mr. Cummings is a scheme to save country shippers from terminal difficulties and relieve terminal buyers from obligations on contract grain of distinctly low grade which has passed Federal inspection, because it has not exceeded the limit of tolerance provided by such inspection, and will bring justice to the country and equity to the terminal miller and elevator operator based on a system of merits and demerits carried by the grain. The Federal system of inspection does not take account of the aggregate merits and demerits of a given shipment but fixes the grades by a single defect such as moisture, color, damage, impurity or test weight.

According to Federal inspection a car of corn testing 17.6 per cent of moisture is No. 4 corn any time during the year and regardless of the fact that the corn may be 100 per cent pure, sound and true to color.

The Lincoln plan in many cases establishes a higher grade than the Federal plan. In such cases country shippers would be benefited and saved from penalty. In other cases where a shipment is of exceedingly poor quality but does not exceed the limit of tolerance for any one defect, the Lincoln plan would give a lower grade, and in such cases the miller or grain operator at the terminal market would receive the benefit. But in each and every case the inspection and intrinsic value of the grain would be nearly parallel as possible under the circumstances.

Mr. Cummings said that the following examples will illustrate the difference between the Federal system of inspection and the Lincoln system approved by the Exchange.

Car 43,800 containing white corn showed yellow grains 2 per cent; test weight 56 pounds to the bushel; impurity 4.1 per cent; total damage 2 per cent; moisture 13 per cent. Under federal inspection this car would have graded as No. 4 white corn because it exceeded the 4 per cent tolerance for impurity. Under the Lincoln plan this shipment would carry one demerit for color, 8 demerits for impurity, a total of 9 demerits which would fix the grade as No. 2 white corn. Mr. Cummings says that in this instance the Lincoln system benefits country shippers. A second example where the local system will benefit the miller and the terminal elevator man at destination points is also submitted.

Car No. 14286 shipped June 18 and loaded with white corn showed that the car contained 2 per cent of yellow grains, tested 48 pounds, contained 3.9 per cent of impurity 5.9 per cent of damage and 17.5 per cent of moisture. Under the federal grade this car would have been listed as No. 3 white corn. By the Lincoln system the following demerits would be recorded: 10 demerits for off color; 20 on test weights; 10 for impurity; 10 for damage, and 13 demerits for excess moisture a total of 61 demerits giving the shipment a grade as No. 6 white corn.

Mr. Cummings states that the Lincoln system is very simple when once it has been elaborated in the form of tables, and no additional labor will be

imposed by it on the inspector. Mr. Cummings has been working on the plan for nearly a year.

THE HIGH COST OF ECONOMY

Secretary E. T. Meredith recently summarized the result of the reduction in the appropriation for the Department of Agriculture for the year beginning July 1. Out of a long list of necessary curtailments of activity we take a few of particular interest to the grain trade.

Many field stations engaged in cereal improvement work will have to be closed. This includes all the stations in North Carolina and Tennessee and those at Amarillo, Texas; Archer, Wyo.; Highmore, S. D.; Brookings, S. D.; Nephi, Utah; Burns, Ore.; and Lind, Wash. Stations at Williston, N. D., and Newell, S. D., already have been discontinued because increased costs could not be met with the money available.

Work toward preventing cereal diseases must be discontinued at the stations at Ithaca, N. Y.; Lansing, Mich.; Auburn, Ala.; Tucson, Ariz.; and Corvallis, Ore., and must be greatly reduced at the stations at Berkeley, Calif.; Milford, Conn.; Bloomington, Ill.; LaFayette, Ind.; Ames, Iowa; Manhattan, Kan.; Crowley, La.; St. Paul, Minn.; New Brunswick, N. J.; Fargo, N. D.; Hershey, Pa.; Knoxville, Tenn.; Arlington, Va.; Pullman, Wash.; and Madison, Wis.

The services of crop-reporting specialists on cotton, tobacco, and rice will have to be dispensed with.

The project designed to give advice to cities concerning their marketing problems must be discontinued.

It will be necessary to discontinue all work to develop direct marketing of farm products by parcel post, express, and otherwise.

The Pacific Coast, the Intermountain region, the South, and Southwest must, in large measure, be deprived of the benefits of the market news services.

The news service rendered the public from most of the large market centers, especially Boston, New York, Philadelphia, Pittsburgh, Chicago, Omaha, and Minneapolis, must be so curtailed that widespread dissemination of information regarding market demands, supplies, and prices will be impossible.

Grain supervision offices at Cleveland and Salt Lake City have been closed and the force of the

Boston office will be reduced. Standards for milled rice, already planned, can not be promulgated because of lack of funds for their effective enforcement.

Other lines of activity which will have to be materially curtailed include investigations of the culture and improvement of the forage crops, the soil survey work, studies of live-stock production in sugar-cane and cotton districts, work in the control of the potato-wart disease, field experiments in the construction and maintenance of roads and of road materials and preparations, farm-irrigation investigations, and studies in farm drainage.

SURVEY OF CO-OPERATIVE GRAIN ELEVATOR COMPANIES

In the United States there are some 14,000 co-operative marketing associations. To many of them, the Bureau of Markets, United States Department of Agriculture, has given valuable assistance by furnishing specimen copies of by-laws and by indicating proper methods of organization and administration.

"The Organization of Co-operative Grain Elevator Companies" is the title of Bulletin No. 860, just issued by the United States Department of Agriculture upon this subject. The bulletin is addressed to those who desire assistance in the formation of co-operative grain elevators, but the subject matter is treated in a manner that makes the bulletin of interest to those engaged in other lines of co-operative endeavor as well. The scope of the pamphlet is limited to matters regarded as fundamental and general, and it is intended that the suggestions and recommendations be considered with references to and in connection with special co-operative laws and the laws governing corporations in each of the several States of the Union.

*Under the chapter of preliminary survey, matters of local conditions, prospective membership capital, volume of business, and methods of survey are covered. Then the processes of actual organization are discussed and a suggested form of by-laws given.

The pamphlet has been written by experts in matters of co-operative associations. It is the composite result of actual experience and should prove of valuable assistance to those interested in co-operative marketing. The bulletin may be had upon request of the United States Department of Agriculture, Washington, D. C.

TRADE NOTES

H. L. Copeland & Co., designers and contractors, Walla Walla, Wash., have taken over the elevator construction department of the Tum-A-Lum Lumber Company of that city.

The Globe Machinery & Supply Company of Des Moines, Iowa, has arranged with Hiedeke Supply Company of Oklahoma City, Okla., and the Union Iron Works of Decatur, Ill., to sell the Globe Dump in their respective territories.

The Webster Manufacturing Company of Chicago, Ill., has taken over the plant at Michigan City, Ind., formerly owned by the Josam Manufacturing Company and will use it for the manufacture of elevator and other lines of machinery.

The Barnett & Record Company of Minneapolis, Minn., has the contract for additional storage tanks, receiving house and loading tower for the Listman Milling Company's mill at La Crosse, Wis. The improvements will cost about \$150,000.

The entire story of Weller Unit Type Bins, their construction and assembling is set forth in detail in a 32 page catalog just received from the Weller Manufacturing Company of Chicago. It bears the title, "Weller Storage Plants." These storage plants are built more expressly for the retail coal dealer and many views are given including those

showing wagons receiving from the bins. The catalog also gives illustrations of handling concrete materials in big construction work, also Weller Standard Stone and Ore Elevators, etc. A feature of the front page is a number of interior views of the Weller plant and a fine view of the entire works which is presented as "the plant behind the product."

The Globe Machinery & Supply Company, Des Moines, Iowa, manufacturers of the Globe Combination Auto Truck and Wagon Dump and manufacturers of engines, mill, mine and factory supplies are preparing for improvements in their plant by the sale of \$300,000 of 7 per cent first preferred cumulative stock. The firm has made a very rapid growth during the past few years, and it is expected the expansion will be greater in the future as, by the sale of new issue, they will have more liquid funds with which to develop their territory. The company has just issued an attractively printed and illustrated folder on its Globe Combination Auto Truck and Wagon Dump. It operates perfectly on any type size or make of scale, or independent of scale and its points of superiority are fully given. A feature of the folder is a printed list of the first 400 users of the dump, now grown into the thousands.

A NEW SHIPPING SCALE FOR COUNTRY ELEVATORS

The old well-known mill and elevator machinery firm, The Strong-Scott Manufacturing Company of Minneapolis, Minn., is manufacturing and putting on the market the Bird Shipping Scale.

This is an entirely new shipping scale design and differs radically from any other type of shipping scale now on the market. Our readers have undoubtedly noted the advertisements of The Strong-Scott Manufacturing Company, covering the Bird Scale, and believing that any up-to-date grain dealer wants to keep posted on improvements in grain handling machinery of all kinds, we have secured some further particulars about this new Bird Shipping Scale from the manufacturers for the columns of our paper, also some illustrations showing the simplicity of the scale and how it is generally applied to an elevator.

The manufacturers of the Bird Scale claim they have succeeded in combining in their scale design all the advantages of other types of shipping scales and in eliminating all the objections that carriers and consignees have had in the past to accepting shipper's weights of bulk grain in carloads as determined by the types of shipping scales generally in use in country elevators up to this time.

In the first place, the Bird Scale is suspended from the structure of the elevator, the weighing beam on the work floor—both the scale and the weighing

through elevator before reaching the car intended.

Another big advantage is claimed for the Bird Scale in the fact that the hopper capacity of the scale is 3,000 pounds, requiring only from 20 to 30 drafts to each car. In this manner the errors in weight, if any occur, cannot possibly be as great as from other types of scales requiring as high as 300 drafts to each car.

The scale proper, whether installed in the cupola of the elevator or not, does not require any supervision or any attention whatsoever. It needs no ad-

when ready to trip. The elevator man then slides out the small poise to balance the beam for the dribble and trips the discharge lever. This requires from five to 10 seconds of his time to each discharge and as he usually must be back and forth on the work floor anyway during the loading of a car he is not greatly inconvenienced by having to trip the scale.

The manufacturers also point out that the big advantages of the Bird Scale system of weighing out grain, the complete record it gives of the loading of each car and the fact that it conforms to the specifications of the Interstate Commerce Commission for adequate weighing facilities in country elevators, besides eliminating the main objections for accepting weights from other types of scales, easily offsets the little time and effort required of the elevator man to trip the scale.

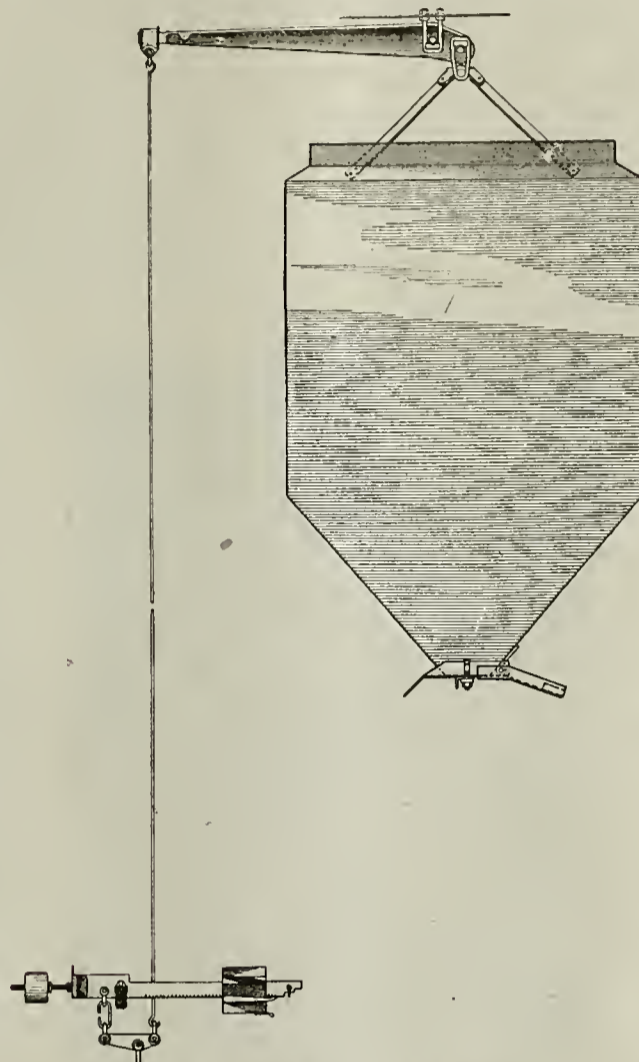
The weighing capacity of the Bird Scale is 3,000 bushels per hour, so the scale can easily take care of the grain from either one or two legs. The upper garner is provided with an overflow outlet which prevents any clogging of the elevator in case the scale for any reason should not be discharged when full. This overflow outlet conducts the grain back into the distributing spout which is set for the bin the grain is being drawn from. In this way no loss of grain or clogging up can occur, no matter how long the scale is neglected.

The Bird Scale is absolutely fool-proof, it cannot be operated wrong as the operating levers are interlocked. In this manner the supply gate cannot be opened until the discharge gate is closed and the discharge gate cannot be opened until the supply gate is completely closed.

The Bird Scale can be installed in the average country elevator without much additional expense. It may either be installed free of the bins between the spout floor and elevator head, or it may be sunk part ways into a bin. To install the scale above, the bins require a height from the cribbing to the elevator head of 16 feet. If there is not quite this height the scale may be sunk into a bin and not reduce the bin capacity more than from 200 to 300 bushels.

About 500 feet of lumber is required for garner and timbers, and a millwright with a helper would be able to install the Bird Scale in an average elevator in from four or five to 10 days, depending upon local conditions.

The makers state that the record the Bird Scale has already made, in elevators where they have been in use for several seasons, has proven conclusively that it is possible to weigh out grain in country elevators with a degree of accuracy that it had been thought impossible to accomplish until the Bird Scale came on the market. The big thing, they state, about the Bird Scale is that it does not require any skilled or expert handling,—it weighs the same for anyone and it cannot make a mistake, eliminating

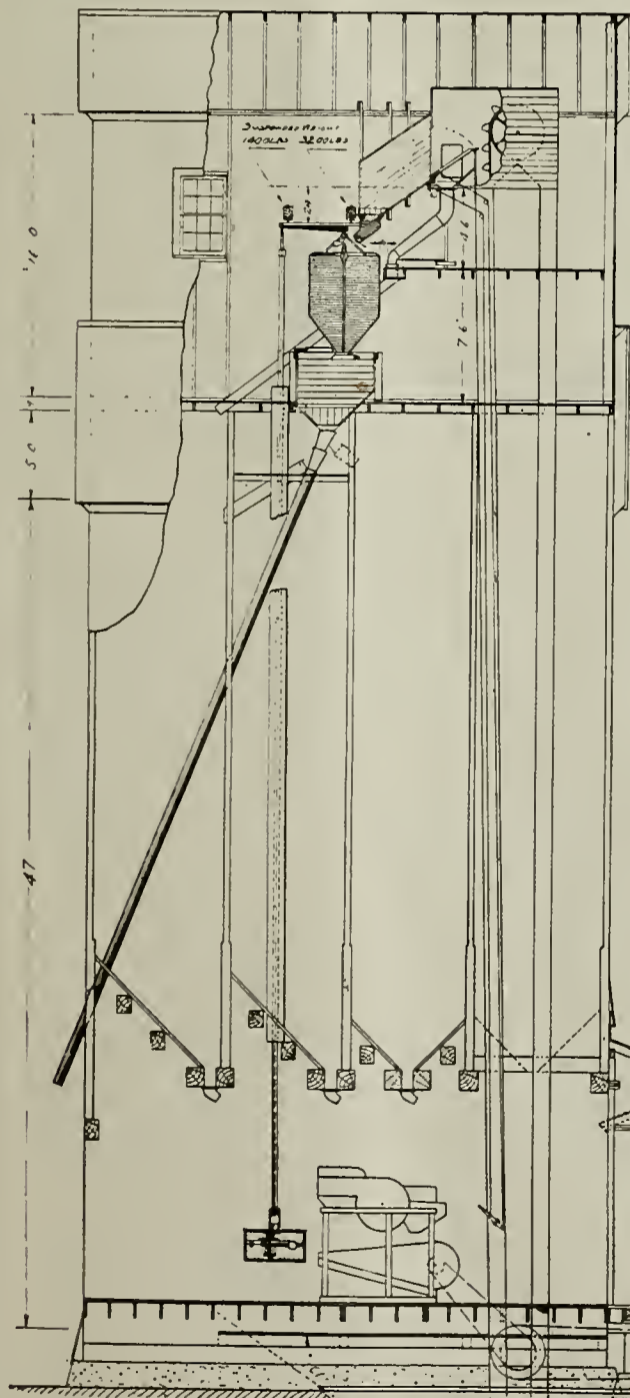


BIRD SCALE AND BEAM IN SUSPENSION

justments or changing for different grains—it weighs all kinds of grain and seeds alike with the same marvelous accuracy as surprised the scale inspectors when the Bird Scale was officially tested.

The weighing beam on work floor is connected with the scale lever through a steelyard rod encased in a 3-inch steel piping running through a corner of a bin and protected by a wooden casing, leaving an opening 10x10 or 12x12 for the pipe to freely move in aligning itself.

A printing beam for recording the exact weight to the pound of each draft as discharged is attached to



PLAN OF ELEVATOR WITH BIRD SCALE IN POSITION

beam swaying free and aligning itself with any out of level condition of the elevator. In this manner the scale will not bind by any settlement or swaying of the elevator.

The Bird Scale being hung in the cupola of the elevator delivers the weighed grain directly to the car, eliminating losses, shrinkage, or any errors that may occur if the weighed grain has to pass

Original List of Drafts Loaded Into Car No. <u>1522</u> Initial <u>000</u> Kind of Grain <u>Wheat</u> Grade and Dkg. <u>No. 1</u> Shipped to <u>Chicago</u> Date <u>July 10, 1920</u> At <u>Chicago</u> Station <u>Chicago</u> I hereby certify this to be the original and a true and correct statement of the loading of this car. <u>Agent</u>		Stencilled Capacity of Car <u>1000</u> Condition of Car When Received <u>Good</u> Kind of Material Used For Lining <u>None</u> Side Door <u>Open</u> } Seals { End Door <u>Open</u> Side Door <u>Open</u> } End Door <u>Open</u> No. of Outside Patches on Car When Received <u>0</u> No. of Outside Patches Put On <u>0</u>
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BIRD SCALE TICKET PRINTED WITH EXACT WEIGHT OF EACH DRAFT

the weighing beam on the work floor. This printing beam is unique and the only one of its kind, inasmuch as it not only records the number of drafts or dumps made but it also automatically prints in plain figures on a ticket, in triplicate, the actual number of pounds discharged into the car. This furnishes indisputable proof of the actual contents of the car, and as the scale also proves itself in balance by starting and finishing the scale ticket printing three zeros, the shipper has a perfect record on a single ticket of the loading of his car—something no other shipping scale can furnish.

The Strong-Scott Manufacturing Company state that a Bird Scale does not need to be watched. It weighs automatically each draft and gives notice

all man-made errors and conclusively proves the exact number of pounds it loads into a car.

Reproduced herewith is a sample Bird Scale ticket showing how the weight is printed automatically with each discharge. The Strong-Scott Manufacturing Company will gladly send catalog and full information to any one interested.

ARTICLES of incorporation have been filed by The Southern Brokerage & Seed Company of Sandersville, Ga. The firm is capitalized at \$35,000.

J. S. McCann & Sons have purchased the entire stock of the Cache Valley Seed Company of Smithfield, Utah. They will operate it under its old name.

Annual Hay Convention at Cincinnati

National Association's Twenty-seventh Annual Meeting a Huge Success Hay Grades the Center of Interest

ALL roads leading to Cincinnati, Ohio, carried delegates to the twenty-seventh annual meeting of the National Hay Association which held its deliberations in that city July 13, 14 and 15. Not for upwards of 25 years had the organization met there but the Queen City surely made up for lost time. Eight hundred hay men were registered the first day of the meeting, its number increasing to 1,000 on the fall of the president's gavel on the opening of the second day. A view of Cincinnati's plugging system was the object of a great many shippers in attending the convention and all of these were most favorably impressed on seeing it in operation. The entertainments were delightful; the program instructive and interesting, and the Cincinnati meeting will pass into history as one of the most successful in the history of the organization.

President F. L. Young of Lansing, Mich., called the Tuesday morning session to order at 10 o'clock and after a brief welcome, the impressive ceremony was given of the presentation of the American Flag by the committee of which Walter Buhrman was chairman. This was followed by the invocation by Dr. J. W. Christie, pastor of Mt. Auburn Presbyterian church of Cincinnati, and then, still remaining standing, every one joined in singing "America" led by Maurice C. Niezer of Fort Wayne, Ind., an ex-president of the Association. Mayor John Galvin of Cincinnati, who was to have delivered the welcome for the city was unavoidably absent but his place was very ably filled by Vice-Mayor Jacobs who left no uncertainty as to the cordiality with which they welcomed the visitors. He felt it was very appropriate to meet in Cincinnati at this time as both presidential candidates, natives of the state, had begun their careers by raising hay and grain. He commended the patriotic ceremony which inaugurated the meeting and said that the recent nominations illustrated the fact that in our country all men were born equal. All business should take an interest in Government matters today, he said it was the duty of all to see that our Government was continued as its founders originally intended. In closing Mr. Jacobs again extended wide the gates of the city to the grain men.

RESPONSE TO WELCOME

The response to the address of welcome, was made, in behalf of the National Hay Association by W. H. Toberman of Toberman, Mackey & Co., of St. Louis. Mr. Toberman spoke as follows:

To me has been granted the honor to respond to the wonderful address of welcome just delivered by your honorable vice-mayor. To visit a city and he made to know that you are welcome is indeed a pleasure, and after listening to this address by Cincinnati's loved and progressive vice-mayor welcoming us to this, the fairest city of the Ohio Valley, inviting us to stay as long as we choose, to partake of your hospitality, to make ourselves at home in your theaters, to visit your beautiful parks and zoological gardens, which, we are told, are excelled nowhere in the country, who could doubt the welcome? The key to your beautiful city has indeed been generously given.

Mr. Mayor, truly we thank you. Your welcome brings me back to my old Illinois home where neighbor and stranger alike were always welcome. We, members of the National Hay Association, I am sure will so conduct ourselves while your guests that there will be no doubt in your minds of our appreciation.

The National Hay Association comes to you with a good name and with a record for achievement of which we are justly proud. Starting 26 years ago with only a few members, mostly from the Eastern and Central States, with such men as John N. Wooliscraft, first president of the National Hay Association, D. W. Clifton, Barney Dean, Percy Goodrich, Willis Bullock, and many others, and spreading North, South, East and West and into Canada, until today nearly 2,000 enthusiastic members tell you they could not successfully conduct their business without it.

When you see that three-wire bale of hay—the emblem of our Association—on a letterhead or stationery, it means fair and honest dealings, and if by chance it gets on a letterhead that carries a message of misrepresentation or unfair dealings, Mr. Taylor

will see to it that its stay is of short duration. This little emblem, ladies and gentlemen, is the hay men's banner. Under it, we have fought many battles for the betterment of the hay trade. It has ever been carried forward in the conflict where right and progress were attacked by fraudulent dealings and never once has it retreated in the face of unjust criticism.

When this glorious country entered the World War, the War Department realized that, regardless of all the improvements of automobiles and trucks, it would take horses and mules to win the war, and that it would take hay, and lots of it, to feed these animals. Acting wisely in this, as in most other things, they concluded that, in order to get enough hay, and the right quality, it was necessary to obtain the services of real hay men—men not only familiar with the qualities, but who knew where and how to get the great amount of hay that would be needed. Where did they go to look for these men? Exactly the right place—the National Hay Association. Leaders of



PRESIDENT F. L. YOUNG

this organization were called into conference with the Quartermaster's Department. Some of our most prominent members were selected as an Advisory Committee, and, I think, out of this grew the appointment of one of our most prominent members, our ex-president, George S. Bridge, to direct and oversee the buying of all the forage for this country.

This little emblem then followed the boys to the many cantonments, followed them after their training was completed on the great transports, and even into the trenches of the great battlefields of France and Italy. I estimate fully 90 per cent of this vast amount of hay was furnished by members of this organization and with a fairness equaled only by that of the purchaser, the United States Government.

This organization, in the face of almost impossible difficulties, has established a uniform grading of hay which is today used or copied by practically every terminal market in the country, assuring the dealer a fair grading of his hay in any market in which he chooses to buy or sell. It has fought successfully every discriminating or unjust raise in freight or classification assessed against the trade; it has offered its services freely to the Department of Agriculture in its survey of the hay situation relative to Federal inspection so ably conducted by Mr. McClure; it has been of great service to its members in adjusting claims on old Government contracts; it has prevented many lawsuits through its Arbitration Committee, and without doubt it can today boast of the finest conducted executive office at Winchester, Ind., of any trade organization in the United States.

And now, Mr. Mayor, on behalf of the National Hay Association, its officers, members, and friends, I want to again most heartily thank you for your generous words of welcome and your manifest spirit of hospitality, and with the splendid start you and the Reception Committee have given us, am confident

that the 1920 convention at Cincinnati will go down in its history as the most successful that the Association has ever held.

PRESIDENT PERIN'S WELCOME

Lyman Perin, president of the Cincinnati Grain & Hay Exchange spoke for that body. Mr. Perin said:

I feel highly honored in being called upon to extend to you this greeting and welcome on behalf of the Cincinnati Grain and Hay Exchange, our market the Queen City and gateway of the South and Southeast.

In expressing to you our delight at having you with us on this occasion, your twenty-seventh annual gathering, I feel that I must burden you with reference to the purpose of the Cincinnati Grain and Hay Exchange which is composed of practically all of the dealers in grain, hay, grain products and kindred commodities. Our motto is: "To inculcate principles of justice and equity in trade." We all know the motto of your Association "Not for self, but for all." It is for your Association and our Exchange to see to it that these purposes are carried out; these mottoes are expressive of the intent of every rule that can possibly be adopted for the betterment of trade relations. We, all of us, must constantly keep these thoughts in mind, and those who follow the dictates of such principles find that they experience very little difficulty in their commercial undertakings.

Naturally, honest differences of opinions arise—without differences of opinions there cannot exist a healthy state of affairs. Trade evolution has grown out of honest disputes—through them we find better ways and means of conducting our business. There must, however, be a governing body to insure impartial and fair decisions. Our organizations act in such instances for the good of all concerned—the Cincinnati Grain and Hay Exchange protects you at all times; our tribunals are open to anyone who may have occasion to do business with our members whether or not he is a member of any other organization. Therefore, I say, we are unselfish, but this unselfishness rebounds to our benefit as well as to the outsider, since, in order to successfully maintain and broaden our market, we must learn the faults of its members.

As members of this Exchange we prefer to do business with the shipper who belongs to your Association because we know that he has the right spirit the moment he expresses a willingness to abide by the rules and regulations which are designed to operate to the good of all concerned. Ofttimes this question is asked: "What does the Cincinnati Grain and Hay Exchange do for the shipper in addition to adopting rules and regulations?" Let me answer that question by reminding you of the services rendered by our various departments:

The Hay Plugging Market

The Cincinnati Grain and Hay Exchange, for the benefit of hay shippers as well as our members who handle hay, has established the hay plugging market. Most of you, if you have not already visited our tracks, have an opportunity to see them while you are here. After years of investigation and study, the grain and hay men determined upon our present method of placing your shipments were they could be made to realize better prices for you—we rented terminals at an annual rental of \$5,000—engaged a crew of laborers who unload the cars. The results speak for themselves; broader market, better treatment, and better prices. What other service do we perform as an exchange?

We furnish inspectors who observe the grading rules and regulations of your Association, not our grades, but yours. When your cars do not move out of Cincinnati, we weigh your hay, and in addition, furnish you with complete condition reports, etc., so that your railroad claims can be properly filed and consequently recognized. When you ship to Cincinnati we serve you. But all these efforts on the part of these two organizations can be of no lasting benefit unless we work together. And when I say work together, I mean not only physically but also in our intents, and this applies to your dealings as individuals with individuals and your Association as an association with our Exchange.

Constructive Criticism Needed

We must continue to criticize each other in a constructive way—when we have any reason to take exception to any act, we must approach a discussion of it in a proper and friendly spirit so that all of us may enjoy the benefits which should result from honest discussions. If you see where an improvement can be made in methods or service, we want to know about it. It is this working together that makes business a pleasure, and the more we can enjoy our business activities, the more satisfaction and profits will be derived. This planning and working together bring about better understandings, and on such a foundation must necessarily rest our credit and financing structures.

Without intimate knowledge of the man to whom you ship, you are at sea as to the amount of credit—your products—you are justified in extending to him, and conversely, without knowledge of you the merchant here can not judge of your worthiness of

the financing which he must do in order to handle your business. While your organization and our organization stand for the highest ideals and are constantly striving to make it safer to do business with each other, and the presence of the individual in either or both these organizations is a stamp of good citizenship and an endorsement, nevertheless finances and credit play an all-important part in our dealings with each other. Therefore, I believe that our organizations should be made to render a greater service to us in the way of maintaining bureaus of finance and credit exchange information, so that when it appears desirable to you to accept the services of some one with whom you have not yet had dealings, you can have an immediate insight into his responsibility.

The hay business in Cincinnati, as a result of the establishment of our plugging tracks, has increased, and is on the increase. Last year our members who handle hay received 10,700 cars, as compared with 8,954 the previous year. During 1917, the war year, we handled 13,383 cars. In 1916 we handled 7,578 cars, and in 1915, 7,382 cars, so that it should be quite clear to all that the Cincinnati market has developed and is developing as a hay market. This is not a time to talk about grain, grain products, etc., but permit me to say that the grain men could say something worth while about Cincinnati as a grain market.

I feel that I am exceeding the time allotted me to address you, so permit me to conclude my message by expressing not only the wish, but the firm conviction, that this convention will pay dividends—no body of men can assemble for the purpose which you have without reaping good results, and it is impossible for men of your intelligence to assemble without evolving plans which will give us more perfect trade relations, a matter so essential in this period of unrest. Permit me to again express my great pleasure for this opportunity to welcome you on behalf of the Cincinnati Grain and Hay Exchange.

The response in behalf of the National Hay Association was made by H. G. Carter of Richmond, Va. Mr. Carter said it had been 25 years since he attended the National Hay Association meeting in Cincinnati. He spoke of the improvements that had been made in the hay trade since that time and said that Ohio was now the rival of Virginia in being the father of presidents. He thought that the Association should hold its next meeting in Virginia and said that Richmond would welcome the hay men most cordially. He hoped they would come to the East and give Virginia a chance to reciprocate.

REPORT OF BOARD OF DIRECTORS

Ex-president Samuel Walton of Pittsburgh then took the chair and President Young presented the report of the Board of Directors as follows:

This convention marks the close of the twenty-seventh year of the existence of the National Hay Association. To have passed the year successfully is a high light in this Association's life.

My message to you at this time I believe will commend itself for its brevity. Its length, however, is no measure of the work and efforts of the Directors during the past year. You will find in the secretary's report a concise and detailed synopsis covering the work of the year and I therefore conclude that nothing further by way of review is desired from me.

To my mind success in the hay business will fall in the future as never before to forward looking men. The trying times of the late war presented their vital problems, but the past year of reconstruction and the present period of the rebuilding of the nation's and world's commercial fabric have brought before us acute issues that must be met fully with a clear vision.

America has cast aside the war period's threatening "isms." The communistic dreams have found no breeding place in the healthy American mind. America has turned to the future. The problems which lie ahead are even greater than those behind for on the remodeling of our business system depends the prosperity and consequently the happiness of our 111,000,000 people.

The greatest need today is an objective for the American people. It is time for the revaluation of values, the reorientation of concepts of public obligations. It is time for the renewal of faith in the ultimate good of business and industry.

There is already evidence that America is turning to the faith of our fathers and will guarantee to every man and every worthy enterprise a square deal. This attitude of our Government has shown itself in the railroad situation. Never since the rails wended their way through pioneer lands connecting new empires to the old have the people appeared to appreciate the part railroads must be accorded in national life. They must be given the opportunity and must make good. The business of the nation demands it.

But what of the business man, the jobber, the hay dealer. They, too, must be accorded a position through which their business will be established. They must have their guarantees as well as the railroads.

I am convinced that today as never before there is

a need for our members to be satisfied with a fair margin of profit and I am further convinced that it is the wish of the great majority of these to be able to operate on only a reasonable profit. Therefore I conclude that anything that influences in a marked degree the necessity of larger margins is of interest to us all.

Under present conditions there is entirely too great a difference between prices received for hay during the early months of the year and those received during the close of the season. The wide fluctuations bring too great hazard to the business. To improve these conditions appears to me the great objective for which this Association this year should work.

In the first place the hay crop, one of the most important to the country, is one of the most neglected. Carelessness prevails in the farmer's methods of handling it. Preparation of the hay for the market is faulty. It reaches its destination in a haphazard manner. The grower fails to realize the value of this crop and therefore fails to give it his best effort. Here is a condition that must be improved for the benefit of the grower as well as ourselves.

Every man who handles hay from the producer to the consumer is of necessity a speculator. There is at present no way he can protect himself in his trade. The market fluctuates rapidly. It is improbable that

necessary. To await months for cars, to have our products in transit for weeks, our money tied up in the meanwhile—these are conditions that must be corrected.

It is not my purpose to discuss this further, but I do declare that we must be frank with ourselves in determining the overhead under which we are laboring. It is necessary that we clearly define our plans for the coming year's business in order to successfully combat the great handicaps to our business. Here let me state that I believe it necessary that we have an increased number of transfer houses to handle our business properly, so that in the busy season hay can be stored at nominal cost in something the same manner as grain.

To further aid in improving conditions; I believe that the time has come when this Association should have four full time traveling inspectors, one in the East, one in the West, one in the South and one in the North and that these men should at all times be at the service of the Association under the direction of the secretary's office. When not engaged in settling differences, they should be used in promoting the best interests of the Association. In my opinion this can be managed so as to cost the Association very little the first year and nothing at all after that time. In fact I believe that after the first 12 months that considered from a dollar and cent standpoint alone the Association will be gaining rather than suffering a loss.

Elimination of a lot of inspection trouble and unnecessary cost of doing business would result, and the members would most keenly appreciate this service from the Association. A strong effort should be made to have every market where any considerable volume of hay is sold in charge of an approved National Hay Association inspector. With four full time paid inspectors working in conjunction with an approved inspector on various markets, much could be accomplished to place the business on a safer and saner basis. I would also recommend that our present grades, when again passed on by you be left unchanged for a period of three years. I believe much closer attention must be paid to methods of baling, a more uniform bale, fewer sizes and a greater accuracy in weight. I would recommend legislation requiring balers to furnish good and sufficient bonds for the faithful performance of their work.

I am convinced that our members have failed to take advantage to the extent that they should of the services of our traffic manager, D. J. Simms. A consultation with Mr. Simms can be had for the asking and you have in him an expert, second to none in the country. If you have traffic troubles refer them to him. I am sure that one trial will convince you of his ability to serve you advantageously.

In the matter of the traffic department, I would recommend that an arrangement be made, if possible, whereby the traffic manager's office be combined with the secretary's office.

Unless I am mistaken, the time is at hand when we should have a special committee for the purpose of passing on questions pertaining to the trade. This committee may be called a committee on trade rules, an efficiency committee, or whatever may seem best; the work of the committee, however, to be to answer inquiries that are coming to the secretary's office and which cannot be properly taken care of. This matter was called to my attention by Secretary Taylor and I am impressed with the possibilities of the same.

I would further recommend that our dues be increased to \$25 a year.

I believe that our Association should go on record proposing that the Legislature provide a portion of the road for the horse. I would recommend that a concerted effort be made to provide suitable highways for the horse. Everything has been motorized until we have "motoritis" and that animal formerly known as a horse at the present time is required to travel in the ditch or take a cross country cut up a by-way to get anywhere.

We are to be congratulated on the survey which has been made by the Government during the past year. Much benefit is bound to be derived from this work.

I am in favor of encouraging the producer to grow more legumes. The dairy interests of the country are growing by leaps and bounds.

I have found in Secretary Taylor one who is efficient, always on the job and contributing absolutely his best to promote the Association's interests. I am frank to admit that I have very greatly underestimated Mr. Taylor's ability and value to the Association, and I have always held a very high opinion of both.

Our efficient paper, *The Hay Press*, is accomplishing a good work. Starting in a small way it has grown in importance and I am sure Mr. Longnecker is deserving of much credit for this work.

I would urge upon the membership, particularly those of you who from time to time are asking yourselves the question as to the value of your membership, comparison of the present conditions with those that existed 10 years ago. Then ask yourselves how much credit for these improved conditions is due the National Hay Association. Such a survey will emphasize the value of co-operation and bring home the benefits derived from our organization.

Though our past history has ever been one of service, both to members and non-members,—and our



SECRETARY J. VINING TAYLOR

the causes of these conditions can be entirely removed but the situation can be greatly relieved by improvement of transportation conditions.

Our major problem today is transportation. All of you have noted from time to time in your trade journals the amount of space used to inform you of the embargoes in force, the strikes and consequent restrictions imposed by the railroads. You are as conversant as I with these conditions and have likewise felt the results.

Under the present conditions of transportation it is not safe for the receiver to sell for future delivery nor for the buyer to contract for future shipment. A condition which forces one to market in July hay purchased the previous October is absolutely harmful to business. With transportation in such a state of affairs there is apparently but one way for the hay dealer to protect himself and that is by exacting a long margin of profit.

Readjustment of rail transportation is necessary. The roads have appealed to the Federal Government for increases in revenue. The roads are being accorded a full day in court. It is noteworthy that protests against the asked increases are not forthcoming in the volume that a similar petition would have brought in years past when our railroads were the financial footfalls of magnates and the popular targets of politicians. Let us get them back on a firm business footing, casting aside special privileges and meeting their problems from a purely equitable standpoint. But this adjustment must be no one-sided affair. American business must not be placed at the mercy of the roads or the roads' owners. An equitable standing must be accorded patrons of the roads. As I see it there is but one way to stabilize business, to protect it from the transportation pitfalls,—and that is the adoption of national reciprocal demurrage. Let the shipper and the receiver as well as the transportation companies be given guarantees.

Under present conditions it is generally unsafe to handle our business in a sufficient volume to yield a large enough profit to make our business worthy of our entire attention. It is possible that some of you feel that the present time is inopportune to ask for national reciprocal demurrage, but we must have assurance that our crops will be moved at the time

motto, "Not for self but for all"—not a mere meaningless phrase, I am of the opinion that our past work has been largely preparatory for much greater work before us, and that we are soon to realize in a more substantial way the results of the work of previous years.

D. S. Wright of Weedsport, N. Y., spoke very highly in commendation of the president's report and made a motion seconded by Mr. Morgan that a committee of seven be appointed by the chair to consider the recommendations contained therein and report back to the Association.

The chair appointed to this committee: D. S. Wright, Bridgeport; W. I. Biles, Saginaw, Mich.; J. W. Sale, Bluffton, Ind.; Geo. F. Brown, Charleston, W. Va.; R. J. Bishop, Almont, Mich.; G. M. Parker, Jr., Jacksonville, Fla.; R. A. Bales, Circleville, Ohio.

President Young, having resumed the chair appointed the following committees:

Nominations: W. A. Cutler, Adrian, Mich.; R. M. White, Duluth, Minn.; H. E. Niemeyer, Cincinnati, Ohio; G. E. Curtis, Kansas City, Mo.; J. W. Legg, Marietta, Ga.; E. H. Beer, Baltimore, Md.; W. E. Galbraith, Seattle, Wash.

Auditing: Dan B. Granger, Cincinnati, Ohio; C. F. Morriss, Richmond, Va.; B. F. Tyler, Kansas City, Mo.

Credentials: J. Carver Strong, Chicago; John Dickson, Pittsburgh, Pa.; Norman Holland, Philadelphia, Pa.

Resolutions: W. J. Armstrong, Milwaukee, Wis.; motion of the Federal grades of grain it was the Winchester, Ind.; C. A. Colman, Lyons, N. Y.; H. A. Bascom, Boston, Mass.

Membership Committee, Squad No. 1: Geo. F. Brown, chairman, Charleston, W. Va.; E. F. Skidmore, Cincinnati, Ohio; W. L. Duncan, Cairo, Ill.; D. T. Taylor, Houston, Texas; E. Wilkinson, Birmingham, Ala.; C. C. Nelson, Rhinelander, Wis.; A. F. Stein, St. Paul, Minn.

Squad No. 2: Llew Gilliland, chairman, Van Wert, Ohio; Rudolph Raabe, Lansing, Mich.; H. G. Morgan, Pittsburgh, Pa.; H. A. Dinius, Roanoke, Ind.; C. F. Morriss, Richmond, Va.; C. B. Nelson, Great Falls, Mont.

REPORT OF COMMITTEE ON LEGISLATION

Following the appointment of committees W. I. Biles presented the report of the Committee on Legislation as follows:

Through the inability of R. P. Floyd, chairman of the Legislative Committee, to attend this meeting, I have been requested to make a report for the Committee on Legislation.

There has nothing come to the attention of this Committee that is considered of any importance, with the exception of the Rules and Regulations of the Secretary of Agriculture, under the Food Products Inspection Law of July 24, 1919, Circular No. 144.

These rules and regulations provide for the inspection of fruit, vegetables, poultry, butter, hay, and other perishable farm products. Our Association, of course, is interested in the regulations pertaining to the inspection and weighing of hay.

The draft of the rules and regulations of the Secretary of Agriculture under Provisions of Act of Congress entitled "An Act Making Appropriations for the Department of Agriculture for the fiscal year ending June 30, 1920," approved July 24, 1919 (Public No. 22, 66th Congress), for enabling the Secretary of Agriculture to investigate and certify to shippers and other interested parties the quality and conditions of fruits, vegetables, poultry, butter, hay and other perishable farm products, when received in interstate commerce at such important central markets as the Secretary of Agriculture may from time to time designate, under such rules and regulations as he may prescribe, including payment of such fees as will be reasonable and as nearly as may cover the cost for the service rendered: Provided, That certificates issued by the authorized agents of the Department shall be received in all courts of the United States as *prima facie* evidence of the truth of the statements therein contained.

It is recommended that these rules and regulations be prescribed and promulgated and designated as of the "Food Products Inspection Law" to be in force and effect immediately until amended or suspended by rules and regulations hereafter prescribed and promulgated under said law. These rules and regulations are to take the place of those in effect for similar purposes under the authority of the act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1919, approved October 1, 1918.

Under Paragraph 5, Section 2, it provides for the agent of the Department of Agriculture authorized and designated by the Secretary to investigate and

certify to shippers and other interested parties the quality and condition of food products under the Food Products Inspection Law.

Under Paragraph 6, Section 2, it provides for an office of a food products inspector.

Under Paragraph 7, Section 2, it provides that a certificate of the quality and condition of food products issued by a food products inspector under the Food Products Inspection Law.

Under Regulation 3, it designates the important central markets at which food products may be inspected.

Under Section 1, Regulation 5, it provides that application for inspection under the Food Products Inspection Law may be made by any person having a financial interest in the food products involved, including the shipper, the receiver, or the carrier, or by any authorized person in behalf of such applicant. Such application shall be filed in the office of food products inspection serving the market at which the food products desired to be inspected have been or are to be received.

Section 2 of the Regulation also provides that such application may be made in writing, by telegraph, or orally by telephone or otherwise. If made orally it shall be confirmed by application in writing or by telegraph stating the facts required by Section 3 of this regulation.

Section 3 provides that each application shall be in English and shall state (a) the name and post office address of the applicant and of the person, if any, making application in his behalf; (b) the names and post office addresses of the shipper and the receiver, the buyer, and the seller, other than the applicant; (c) the name of the shipping point and of the destination; (d) the date of the shipment and the date of actual or expected arrival if known; (e) the kind and quantity of the food products involved; (f) the identification of the food products by (1) grade, brand, or other marks, if possible, and (2) car initials, car number, and name of the delivering carrier, (3) name or other designation of boat or vessel, (4) name and location of store, warehouse or other place where the food products are located, or (5) any other necessary information and (g) the purpose for which and the particular quality or condition concerning which inspection is requested, to which may be added the particular time and place at which it is desired that the inspection be made.

Section 4, each application shall be deemed filed when delivered to the proper office of food products inspection. When such application is filed a record showing the date and time of filing shall be made in such office.

This bill is about the only thing I know of to report on and while it is very hard to forecast the outcome of any law, still it is well for this Association to keep in touch with it. It seems to me it is a question for the Association to decide whether grading and inspection under the rules and regulations of the department is what is needed or not.

The session then adjourned.

WEDNESDAY MORNING SESSION

President Young called the Wednesday morning session to order at 10 o'clock and Warren Deane of Auburn, N. Y., gave the report of state vice-presidents, in part, as follows:

Like other tradesmen, our vocation has, for many months, been surrounded by uncertainties. All has been a state of bewilderment.

All parts of the States and Canada have alike been embarrassed by car shortage and embargoes.

The season just past experienced one of the worst tie-ups in traffic the East has ever known, owing to the blockade from snow. Impending regular strikes and outlaw strikes, the latter a 1920 contribution, the shortage of labor, 200,000 too few box cars, with the corresponding lack of railroad motive power and a correspondingly unsettled market, today a feast and tomorrow a famine—all these have confronted the hay man.

Where a few seasons ago were our best markets in our larger cities, today we find an entirely different situation, owing to the advent of the motor trucks.

The money exchange rate has been a real factor in trading between our members in Canada and the States.

The feature of the year is the phenomenal demand from our interior and Middle Western cities.

Alfalfa continues to gain in favor, and its use is broadening into every nook and corner of our consuming markets.

A prominent feature in all our markets is the demand for the better grades and the inadequate supply of hay of highest quality.

Let us hasten the day, as individuals and as an Association, when all our markets will adopt a uniform grading system.

I have been favored by a liberal response from our vice-presidents. We have 42 definite reports from a possible 49. The information received is quite up-to-date, as all of the communications on which my report to you today is based, were received within 10 days, and many by telegram.

A pronounced feature through the reports is the absence of the carry-over of old hay.

Harry W. Robinson of Cleveland, Ohio, presented

amendments to the Arbitration and Investigation Rules of the Association. Only such changes were made as in the opinion of the committee would make them more workable and promote fairness in their application. They were adopted as presented.

An address on the subject "Why Terminals Should Use National Hay Association Grades" was made by D. W. McMillen of Fort Wayne, Ind. Mr. McMillen said that nearly all the markets of the country now use the National grades, almost in their entirety. Where the rules of the National Hay Association had been adhered to, there the least trouble had ensued. The grades of the National Hay Association might at times need changes but until these were made they should be used by all members of the organization.

H. G. Carter of Richmond, thought the grade "standard" should be eliminated. He pointed out that the line was very close between "Standard" and No. 1 and if a man looked through a car containing these grades four or five times he would very likely change his opinion of the grades just that number of times. He thought also that the words "reasonably sound" should not apply to No. 2 mixed hay. The word "reasonably" had a very broad application and No. 2 mixed should be only sound hay.

Walter E. Galbraith of Seattle, Wash., said they had adopted the National grades in Washington and that it had been a great benefit to place their business under National Hay Association rules and terms. He thought the "Standard" grade met a long felt want.

F. F. Collins of Cincinnati, said that in the formation of the Federal grades of grain it was the opinion of all markets that grades should be expressed only in numerals. He did not see why the National Hay Association should have a "standard" grade.

P. E. Goodrich, Winchester, Ind., explained that the "standard" grade had been eliminated a few years ago but had been reinstated by request of central western hay shippers.

L. W. Dewey of Blanchester, Ohio, expressed himself as not in favor of "standard" grade.

On motion by Mr. Alexander of Marion, Ohio, the subject was referred to the Grades Committee with recommendation that the "standard" grade be eliminated from grades of the National Hay Association and that the word "sound" replace "reasonably sound" as applied to No. 2 mixed hay.

THE NEED FOR UNIFORM GRADES FOR HAY

H. B. McClure of the Department of Agriculture, Washington, D. C., made an address on "Need for Uniform Grades of Hay."

Several months ago your secretary, Mr. Taylor, wrote to the Department of Agriculture asking what its intentions were regarding the adoption of grades to be used under Federal inspection and grading of hay. He also very kindly offered to cooperate with us in every way possible, and wished to be kept informed as to our progress so that he, in turn, could inform the trade.

Since then I have made every effort to do as he requested, as he is one of the most prominent and active members of this great national Association. I wish to take this opportunity to state that I first met Mr. Taylor at an annual meeting of this body at Niagara Falls several years ago, and I firmly believe that he has the interest of this Association at heart and that it is his earnest desire to do everything within his power to better conditions in the hay business. I believe that he and I have come to see some of the hay marketing problems in the same light, and I am certain that he has been of considerable benefit to me in the past.

About a year ago he wrote me, stating that there was considerable demand among the trade for definite information regarding the shrinkage of market hay. In compliance with this request, I am pleased to report to you that bulletins, containing a summary of all of the shrinkage experiments made during the last 40 years, is now in galley proof and a copy of this bulletin will probably be mailed to every member of this Association within 60 days. Part of the credit for this publication should go to Mr. Taylor, as he is the one who saw the need for it and interested me in getting the material put into bulletin form.

My presence here today is due to the insistence of your secretary that the National Hay Association is entitled to know what the Department of Agriculture is doing in regard to the standardization of grades for hay. I will attempt to give you an insight into our work by describing it under the title, "Need for Uniform Grades for Hay."

But before going further, I would like to make my

position clear to all in order that none of my remarks will be misunderstood. First of all, permit me to say that I am not here to criticize or find fault in any way with this organization, its members, its grades, or the manner by which any of its inspectors perform their official duties.

I am not ignorant of the marketing problems that confront you as an association or as individuals, as will be explained later. During the last 13 years, while in Government employ, my entire time has been devoted to a study of the production and utilization of hay. Better methods of growing, curing, using labor and machinery, stacking, baling, etc., have been studied in practically every important section of the United States. Before the organization of the Bureau of Markets, some six years ago, I made a hay marketing survey, visiting over 50 of the leading hay markets, and came into intimate touch with those who handle hay. This survey was published in a bulletin entitled "Market Hay" in 1912.

Since my work has always been with those who were closely connected with some phase of the hay industry, I feel that I am among friends today, and that our interests are mutual and that an open and frank discussion of conditions as they exist will be mutually beneficial.

Authority for Federal Inspection

The law authorizing Federal inspection and certification of grades, which would be of such a nature that it would be accepted as *prima facie* evidence by the courts, was passed by Congress and became effective July 1, 1919. It was not known among the hay trade that such a law was even contemplated by Congress. Indeed, its passage seems to have been a complete surprise to the Bureau of Markets, which will have charge of the inspection, asked for by interested parties, of hay shipped in interstate traffic.

On July 1, 1919, when this law became effective, the Bureau of Markets was totally unprepared to institute Federal inspection of hay. On the first of August I was transferred from another bureau to the Bureau of Markets and placed in charge of this project. I soon realized that an immense amount of work would have to be done before any attempt could be made to successfully inspect hay by the Department of Agriculture.

Because of the war, and other causes, very little attention had been given to the marketing of hay. Hence, our first work was to find out the true condition of the hay business in different parts of the United States.

It is true that many complaints had been received regarding methods of selling and inspecting hay in various markets, but it was thought advisable to learn about these things ourselves rather than take for granted that these complaints were, in all cases, based on facts and were every-day occurrences rather than exceptional instances.

Scope and Extent of the Marketing Survey

A survey was planned so that complete information would be obtained at each point visited. There were two objects in making this survey: (1) To get accurate and first-hand information on all of the factors that have a bearing on the marketing of hay, and (2) to get the opinions of individuals as to the value and use of the grades they were using, and their views on the benefits to be derived from uniform grades.

The study of marketing practices was divided into three parts:

- (1) Methods of Marketing Hay at Country Points.
- (2) Marketing Hay at Terminal Markets.
- (3) Marketing Hay in Consuming Territories.

Thus it will be seen that every agency in the marketing of hay was represented in the survey.

In scope, the survey covered practically the entire United States. A total of more than 30,000 miles were traveled last fall and over 1,000 representative hay men were carefully interviewed on all phases of the hay marketing business.

I wish to take this opportunity to inform you, Mr. President, that it would be very difficult indeed to find a finer and more courteous set of men than those engaged in the hay business, especially those who have built up a good, legitimate business and are in it to stay. Our reports of interviews show that the hay trade, as a whole, is intensely interested in hay marketing information regarding markets away from their own market.

Our information was gathered at about 250 points. Only one state, Wyoming, was not visited in the survey. A few of the more important subjects upon which data will soon be available to the trade are listed as follows:

Marketing Hay by Producer or Country Shipper

1. *General information* concerning average weather conditions during hay harvest.
Producer's ideas as to time of cutting, methods of curing and their effects on the marketing of hay.
2. *Selling to Country Shippers.*
 1. Competition between "regular" country buyers, and effect of speculators.
 2. General practices in selling hay. Factors making different methods advantageous to producer or shipper.
3. *Factors Determining Size and Weight of Bales.*
Character of the hay. Local conditions. Precedent. Demand.

4. *Cost of marketing Hay by Producer.*
By those who own presses. When baling is hired. Cost of delivering by the producer.
5. *Methods of Grading Hay at Country Points.*
From field baling, warehouses, stacks and barns. Bale, load and lot inspection.
6. *Methods of Loading Cars.* (The car situation.)
Best methods of loading different sized cars and bales.
Loading "new" hay.
Precautions taken to insure the loading of uniform grades.
Direction of movement of hay from producing sections.
7. *Character of Sales.*
Consignments, at point of shipment, to arrive, etc. Shipping to new firms. Use and value of traveling salesmen.
Use and value of warehouses by country shippers.
8. *Comparison of Returns with Invoices.*
Variations in grades and weights from tag weight, terminal markets, and when shipped direct to consumers.
9. *Variations Due to Variety of Hay.*
10. *Co-operative Marketing.*

Marketing Hay at Terminal Markets

1. *General condition* and recent changes in method of selling.
2. *Methods of Purchase.*
A study and comparison of all of the methods used in the markets.



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3. *Consignments and Reconsignments.*
General practices and statistics on these factors.
4. *Handling and Placing Cars.*
General information as to location of yards and factors which help or hinder marketing hay.
5. *Market Weights.*
Kinds of weights used and comparison of value of each kind.
Extent to which each kind is used and effect on disputes, etc.
6. *Inspection and Grading Hay.*
Duties of the inspector.
Rules used for grading hay.
Interpretation of the rules.
Kind of inspection and its value to the trade.
Purpose of "in" and "out" certificates.
7. *Movement and Storage of Hay.*
Amount of hay received yearly.
Portion used in the city.
Markets to which hay is reshipped.
Facilities for storing hay.
Movement of hay to market by rail and boat.
Movement and effect of "new" hay on the market.
8. *Kinds of Hay Received and Their Relative Importance.*
The quality as a whole of the hay received.
Value of the market for handling certain kinds and grades.
Common faults found with market hay.

Marketing Hay in Consuming Territories

1. *Methods of Purchase.*
By grade, delivered, deferred shipment and direct from the producer or shipper.
2. *Methods of Grading.*
Shipper's grades.
Comparison of grades of hay received from different territories.
3. *Methods of Weighing.*
Use and value of tag weights.
Wagon scale weights.
Official and shipper's weights.
4. *Study of General Complaints.*
Including in part such complaints as:

Quality not equal to grade bought or contracted for.

Weights short of invoice.

Questions relative to time of shipment.

Cars not loaded with hay of uniform grade.

Hay arriving out of condition.

5. Selling Hay to Consumers.

A study of the kind of hay fed by:

Owners of draft horses (transfer companies).

Owners of light weight horses (livery, driving, saddle horses).

Logging and mining concerns.

Cotton and truck farmers, etc.

6. Factors Affecting Retail Markets.

Reasons why consumers prefer certain kinds, grades, sizes, etc.

Variation in demand and price for certain cuttings, etc.

Preference on the part of the consumer to buy by weight or bale.

Preference for hay from certain producing sections.

This material will be published in five bulletins and will be sent to those interested. This preliminary survey gave us a very comprehensive knowledge of conditions and of the problems of the various classes and enabled us to know the sentiment and desire of the trade regarding certain phases of marketing which are not exactly satisfactory at the present time.

I will mention, very briefly, some of the more important conditions that exist and their effect on marketing hay and the need for uniform grades.

Shipping Direct Is Hazardous

The amount of hay now handled directly from the country shipper or producer to the distributor or consumer is very small. There is at present no uniform grade or at least no uniformly interpreted grade that can be used as a medium in making sales or purchases of hay in territories remote from each other.

What is considered as No. 1 timothy, for example, in one producing section may be considered as No. 2 timothy in another producing section, and of still another grade in the consuming section to which it may be shipped.

If a farmer or shipper, located in a producing section, desires to offer his hay to a consumer or a distributor in a consuming section, he must first find out what set of grades that section uses. Then he must find out how the receiver interprets these grades. It is next to impossible to do this through correspondence, hence it becomes necessary to ship a few cars and compare the grades placed upon them by both parties to the transaction.

By this method it may be possible to reach a fairly satisfactory standard by which those two particular parties may transact some business. But if one shipper cannot supply all of the demands of the one consumer, or if the one consumer cannot take all of the hay offered by the shipper, the same plan will have to be used for each different customer.

It can readily be seen that this is a very unsatisfactory way of doing business. Besides, hay often varies as to mixture and general quality, from year to year, and the hay business, under certain conditions, simply becomes a series of trials, many of which may not be satisfactory and often prove very costly to the producer and shipper.

The Personal Element

Perhaps the largest factor in the hay business today is the personal element. It seems that a great deal of success is due to the personal relations of the interested parties. The avoidance of trouble, disputes, rejections, etc., are often due to the fact that both parties are good, honest business men who are only looking for a fair and legitimate profit. It costs money and a lot of time to hunt out the reliable from the unreliable business men.

We have noted instances of where a shipper would invoice a car as being No. 2 timothy, when as a matter of fact there might be some "off" grade hay. However, the receiver knowing the shipper and of the conditions under which the hay was bought and loaded, knew that there would be no trouble over the invoicing, as he knew the shipper was not trying to "slip something over on him."

Hence the value of personal relationship between buyer and seller. In other instances this practice causes a lot of trouble. Not only is there a lack of standards, but the lack of disinterested parties to officially inspect and grade hay that is shipped direct in marketing hay.

Some of the shippers are unfair and will not load cars with a uniform grade of hay. Also buyers are unfair and will not accept hay which they have bought if the market has declined, always using the claim that it is not of the grade bought, as a basis of rejection, knowing that at present there are no means of officially establishing the facts regarding grade.

These conditions have not only made direct shipping of hay very impractical but it has also increased the cost of marketing hay at terminal markets where the margin must be widened to take care of the loss occasioned by the lack of proper standards and facilities for handling hay.

Those who ship hay direct to consumers or distributors in consuming territories claim that there will be no betterment of conditions until uniform grades and an unbiased official inspection service is put into effect. In fact those doing this type of business are of the

opinion that the sooner something is done to change present methods the better it will be for all concerned.

Inspection of Hay Upon Request in Terminal Markets

The practice allowed in some of the markets of inspecting hay only upon the request of the receiver may be used unfairly. The abuse of the privilege is that when a market has a good demand for hay and the prices are advancing from day to day, the hay bought to arrive by dealers in that market is accepted as invoiced without much attention being paid to its grade unless it is of such a quality that notwithstanding the advancing market it will show a loss.

For example, hay bought to be No. 2 timothy or better will be accepted on contract at contract price often even if it actually grades as No. 3 timothy. Since the dealer, due to the advance in the market, has a profit anyway he does not have the hay graded but accepts it as of the grade bought.

However, if the market has declined, he at once asks for inspection and an official certificate of grade, and if the hay is not of the grade bought it is immediately rejected, or the shipper is notified of the discount at which it will be accepted. It will appear at first thought that the shipper is profiting by this practice, since he receives more for his off-grade hay on the advancing market than it is really worth.

However, the actual result is that the shipper can never learn what is the true grade of his hay, or at least what is the interpretation to expect at that market, and so through this and other practices he is ultimately the loser. It might be mentioned also that this hay, which was not of contract grade and which was received on a declining market, is usually discounted not only the amount of difference in price between the grade sold and the grade delivered, but the amount of the decline in the market is also added to the discount and the shipper must accept this discount, for the reason that he cannot sell the hay to any better advantage to anyone else.

In-Bound Shipments Only Are Graded

At some of the markets, which have adopted some standard of grades, only in-bound shipments are graded. At St. Louis from January 1, 1919, to December 1, 1919, there were inspected on arrival, 12,084 ears of hay and official certificates as to grade were issued.

At least 50 per cent of this hay was re-shipped or sold to points south or southeast, but no certificate of grade was furnished, and from interviews with dealers and consumers, in the territory to which this hay was shipped, it appears that in some instances, the hay was sold and shipped on a higher grade designation than the in-bound certificates would indicate the grade to be.

At Memphis, from January 1, 1919, to November 1, 1919, there were inspected on arrival, 2,851 ears of hay and official certificates as to grade were issued. Nine certificates on out-inspection were issued, yet it is estimated that more than 50 per cent of all hay in this market was re-shipped and resold to points farther south.

Many other markets could be named which have the same practices, for it has been noted that at present, very few certificates of grade are officially issued for out-bound shipments even in markets which provide for in-inspection on all hay arriving on these markets.

Out-Bound Shipments Not Graded

Except in rare instances, out-bound shipments are not now graded. It is claimed by some dealers who do a shipping business from the distributing markets, that there is at present such a difference of opinion among consumers and dealers, located in consuming territories, as to what constitutes the qualifications for the different grades that it would be impossible to sell hay on the same grades on which it is bought in these distributing markets.

However, the practice is very unfair to the buyer, and in many cases causes him to pay a premium for low grade hay.

It has also been found that in some instances, if the southern receiver insists on an out-bound certificate, the price first quoted will be raised at least \$2 or more per ton over the price when no certificate is to be sent.

The survey has also shown that many of the buyers, in these consuming territories, do know the qualifications constituting the grades as established by the rules of the National Hay Association, but are not able to secure the kind of hay they desire by reason of the fact that they secure no official out-bound certificates, and must take the hay on the grade of the various shippers.

It is common knowledge that grades are raised on lots of hay shipped into the South. Instances can be cited of where hay as low as No. 3 grade has been invoiced as No. 1 for southern delivery. In some instances the southern receiver is aware of the fact that grades have been raised, while in other instances he is in ignorance of this practice.

Grades Used for Timothy Show Trend

The need for more uniform grades or at least for present grades being supplemented, is strikingly shown by the rather general use of "special" grades which are being used for certain kinds of timothy hay.

In the eastern portion of the timothy section considerable hay is shipped as "Top" No. 2 hay. In many instances, this is identical with the present

grade of standard, but in other instances it is not quite as good as standard. Those using this grade say that such hay will be accepted under this name and bring a better price than will standard hay and that much trouble is avoided by its use.

A comparatively large amount of hay is being shipped as "feeding" hay, and it would seem that there should be some provision made to recognize this type of hay, which is common in many producing sections. "Feeding" hay is usually a mixture of timothy and "other" fine tame grasses and if given an official inspection or sold strictly according to the rules of this Association, it would have to be graded as sample hay.

Consumers will not risk buying this kind of hay by grade designation since sample hay, as defined by your rules, may be threshed timothy or almost any kind or mixture not covered by other grades. Hence the shipper or seller has been obliged to select a name for this grade which would distinguish it from hay of inferior quality and value due to such causes as over-ripeness, improper curing, weeds, or other factors which would make it undesirable to the feeder.

This kind of hay is sometimes sold as "stable" or "stock" hay. Another special grade is known as North Carolina No. 1, which meets the requirements of certain classes of southern consumers who do not require the better grades of timothy. If this hay was invoiced as No. 3 it would not sell as readily as when invoiced under the special brand. Neither would it be as likely to bring as good a price, because when one thinks of something as being third in quality he knows that it is a long way from the best grade.

The grade designations of the poorer grades are not the only ones that have been changed. It has been found that members of this Association quote "choice" timothy hay and invoice is as such in some instances.

It is perfectly obvious to all that the elimination of the old grade known as "choice," was for the best, even though it is quite probable that there is more or less real choice timothy hay produced today. But in some instances it has been found that the hay quoted as "choice" was not choice hay at all. It was found that the quotation on "choice" applied to sections where large amounts of comparatively low grade hay is consumed, and where not all, by any means, of the consumers know exactly what is meant by the term "choice."

Another practice along this line has gradually grown regarding the use of grade designations that tell where the hay is produced. An illustration of this may be cited with respect to Aroostook County, Maine, timothy. The hay is rather coarse in texture, due to the application of commercial fertilizer for potatoes, and shippers believe that it would be discriminated against if it were to come into competition with and be graded by the same rules as is the smaller, finer timothy grown in the Central States. So in order to sell it to advantage and to distinguish it from hay grown in other sections, where conditions of growing are different, it is sold as Aroostook, No. 1, 2, etc.

I can find no real objections to this method of grade designation since it is simply a means taken to sell hay advantageously, and who can say, at present, whether this Aroostook County, Maine, timothy is inferior or even superior to that produced in another part of the country. On the Boston market it has become necessary to designate one kind of hay as "East" or "Eastern" hay, and another as "fine" hay, and still another as "finish" hay, in order that the consumer or buyer might know what kind is being quoted. All of these special kinds of hay can be graded under your present rules, but a grade certificate would not show, in any way, what kind of hay it really is other than sample hay or some grade of timothy.

Selling Hay by Grade and by Description

From the cases just mentioned, it will be seen that the special grades have been used to describe a particular kind of timothy hay, which is something that our present grade designations do not even attempt to do.

If the consumer orders a ear of No. 2 timothy, he will not know until the hay arrives, whether it will be straight timothy, timothy mixed with clover, red-top, Kentucky blue grass, meadow fescue, orchard grass, or many other kinds of tame grasses comprising from 1 per cent up to one-fourth of the mixture.

But if he is an experienced feeder and knows what he wants, it will make quite a difference in his total feed bill if the hay received is high or low in protein. Yet the shipper is permitted, under present rules, to send him a mixture of timothy containing up to one-fourth of any tame grass or straight timothy only.

However, feeders are not buying hay by grade designations today. They have come to use the grade designations to apply to quality only as indicated by color, and they order the mixture part of it by describing the kind of hay they want. In fact, at present a great deal of hay is sold by description whenever the consumer and dealer or shipper, as the case may be, can get together and come to an understanding as to the meaning of the quality of the kind of hay wanted.

This is sometimes accomplished by the use of

traveling salesmen, but many small shippers cannot afford to have a road man as their business is too small or would entail too much expensive traveling. It seems to me that there is a growing demand for grades that will classify or specify accurately the kind of hay that is being marketed. This is true because feeders are beginning to understand that there is quite a difference in the total amount of the various nutritive substances in various hays.

Guesswork in Feeding Is Being Eliminated

There never was so much attention paid to the real feeding value of hay as there is today. The time when feeders were ignorant of the difference between the different kinds of market hay has almost passed away in many parts of the country. Formerly feeders took it for granted that the kind that grew in their locality or that with which they had been in the habit of feeding must of necessity be the best hay. Many proofs could be cited to show how little feeders really knew or care about feeding value in hay.

A few years ago a large circus stopped at a certain town in Alabama, and the advance agent made arrangements for a car of northern timothy to be shipped several hundred miles to that town by circus day, in spite of all efforts, on the part of the local feed dealers, to sell Johnson grass hay for the circus stock.

The advance agent finally agreed to purchase Johnson grass hay for bedding. Quite a surprise awaited the feeders of the circus, for they found that the Johnson grass "bedding" was eaten up clean, while the timothy in the mangers remained untouched. The circus animals were not so sure about timothy being the best hay.

A few years ago, in central Kansas and Nebraska, stock feeders could hardly be induced to even try alfalfa as they preferred ordinary prairie hay for fattening their stock. Indeed, they had to find out for themselves, by actual feeding tests, that the alfalfa was not only as good as prairie hay, but better.

In traveling over this country I found that home-grown hay was always thought to be better than that produced in distant parts of the country. In the Far West feeders swear by grain hay. In the South Johnson grass hay ranks first. Timothy has ranked first in the eastern half of the country for a long time, but it is beginning to take a second place on account of clover, especially alsike clover, coming to the front.

In some parts of the Middle West prairie hay has long been the standard. A few years ago a questionnaire was sent out to a large number of rural mail carriers, and it was found that, in the section where the prairie hay and timothy hay sections overlap, corn fodder was considered to be the equal of these hays.

Mr. Meleher of Baltimore and your secretary have both written to me asking that I tell you something about the comparative value of different kinds of market hay, and also something about the rank of the different grades of market hay.

This is such a large subject with so many influencing factors that I will only have time to barely mention one or two of the more important points, as shown by chemical analysis.

Variation in the Feeding Value of Timothy

Someone suggested that it would have been very interesting and instructive if chemical analysis could have been made of the samples of hay here on exhibition so that we could know to just what class or type of livestock each kind and grade was best adapted.

If this could have been done it would have been a big help to all, but I am going to show you a chart which will explain why this method of judging hay can never be used except under special conditions.

Table I.—Showing the Variations in Per Cent of Protein in Timothy Produced in Different Parts of the Country, and as Influenced by Stage of Maturity When Cut and by Use of Fertilizer.

Sample No.	Per cent of crude protein	Factors affecting protein content	Stage of maturity when cut	Where grown
1.	19.50	Proper amount fertilizer used	In early bloom	Connecticut
2.	6.75	Improperly fertilized	In early bloom	Connecticut
3.	10.99	Grown on Good soil (1881)	In full bloom	D. C.
4.	10.20	Grown on Good soil	In early bloom	D. C.
5.	8.48	Grown on Poor soil	In early bloom	D. C.
6.	9.90	Grown on Good soil (1880)	In full bloom	D. C.
7.	7.46	Grown on Poor soil	In full bloom	D. C.
8.	9.91	Factors causing variation in protein content are unknown	In full bloom	North Carolina
9.	9.53	Factors causing variation in protein content are unknown	In full bloom	D. C.
10.	8.84	Factors causing variation in protein content are unknown	In full bloom	South Dakota
11.	8.74	Factors causing variation in protein content are unknown	In full bloom	Maine
12.	8.62	Factors causing variation in protein content are unknown	In full bloom	D. C.
13.	8.56	Factors causing variation in protein content are unknown	In full bloom	Pennsylvania
14.	8.41	Factors causing variation in protein content are unknown	In full bloom	New Hampshire
15.	7.75	Factors causing variation in protein content are unknown	In full bloom	North Dakota
16.	7.69	Factors causing variation in protein content are unknown	In full bloom	Maryland
17.	7.06	Factors causing variation in protein content are unknown	In full bloom	Iowa
18.	5.90	Factors causing variation in protein content are unknown	In full bloom	Oregon
19.	5.79	Factors causing variation in protein content are unknown	In full bloom	New Hampshire
20.	5.52	Factors causing variation in protein content are unknown	In full bloom	Indiana
21.	3.52	Factors causing variation in protein content are unknown	In full bloom	Utah

This chart shows the variation in the protein content of good timothy hay and explains why it would not

be advisable to base the value of different kinds and grades, such as are on exhibition, on a single analysis of each kind.

The protein in these 21 samples varies from 3.50 per cent to 19.50 per cent. In other words, there is a variation of more than five times the protein content of the poorest sample. If we had on exhibition 21 bales representing these 21 samples, it is quite possible that they might all look alike and I doubt very much if anyone here could tell the high protein bales from the low protein bales.

The kind and amount of fertilizer used is a governing factor in some instances in the protein content of hay. Sample No. 1 was properly fertilized and contained nearly three times as much protein as did sample No. 2, which did not receive the proper kinds and amount of fertilizer.

Notice the variation in protein in timothy grown on good and on poor soil. The type of soil, in this case in

good timothy hay. If such plants are deficient in nutrients it can readily be understood how they would lower the total feeding value of the mixture.

But the chemist has found that these fine grasses and wire grasses contain even more protein than timothy itself. Hence there must be some other reason for discriminating against these plants when they are mixed in with timothy.

Wire grass cut just before heading contains almost five times as much crude protein as does timothy, and when in bloom it just equals timothy. In nitrogen free extract, fat and fiber, they compare favorably with timothy. (See Table 2.)

Russian thistle is a weed that will cause good timothy to grade down every time it is found, but strange to say, it contains almost three times as much protein as does timothy, and it is a well-known fact that this weed is known to make a splendid feed for stock, provided it is cut at the proper time. However, this is a provision that applies to all kinds of hay.

Table 2. Average Percentage Composition of Plants in Market Hay (All calculated to a 10 per cent water content)

Kind	When cut	Crude protein	Nitrogen free ext.	Fat	Fiber
Timothy	Av. of all analyses	6.33	45.90	2.53	30.26
"	Cut before bloom	9.50	43.74	3.11	27.25
"	Early to full bloom	6.50	45.03	2.68	30.35
"	Late bloom to early seed	5.82	46.53	2.96	29.93
"	Nearly ripe	5.34	46.40	2.26	31.50
ANALYSIS OF WEEDS AND GRASSES LOWERING GRADES					
Wire grass	Before heading	30.02	27.54	5.76	16.47
"	When heading	7.56	47.75	1.88	25.76
"	In bloom	6.30	45.45	1.44	30.51
"	Seed fully formed	7.45	45.50	1.75	25.50
"	Seed about ripe	11.19	42.51	3.18	21.10
Lambs quarters		23.93	33.08	4.28	12.27
Russian thistles		17.39	30.67	2.86	23.89
Meadow foxtail	Heads just appearing	14.13	46.98	4.23	16.38
"	Before bloom	12.24	46.44	4.05	20.16
"	In bloom	9.72	48.78	3.06	21.42
"	After bloom	7.74	48.88	3.15	22.85
Daisy or white top		14.00	39.78	4.26	21.84
Kentucky blue grass		8.60	42.22	3.00	29.34
Crab grass hay		7.95	42.66	2.38	28.55
Orchard grass hay		8.05	41.13	2.95	30.85
Redtop	In bloom	7.05	43.73	2.05	29.25
Chess or cheat		7.07	45.40	2.26	27.51
Quack grass hay		6.97	39.21	1.91	34.92
Meadow fescue		6.93	42.91	2.03	31.00
Western foxtail		6.81	46.03	1.94	26.66
Alfalfa	Av. of all analyses	14.67	36.74	2.26	27.86
"	First cutting	13.68	35.60	1.66	30.41
"	Second cutting	14.27	34.37	1.64	30.97
"	Third cutting	14.43	36.36	1.77	28.05
"	Fourth cutting	17.04	36.42	1.82	26.37
"	Before bloom	21.10	35.60	4.04	19.66
"	In bloom	14.60	34.54	1.74	29.30
"	In seed	12.27	40.48	2.51	27.72
Alfalfa leaves		21.69	39.70	3.27	12.24
Alfalfa stems		6.00	26.60	0.85	51.90
Red clover	Av. of all analyses	13.23	40.00	3.20	26.35
"	Before bloom	18.78	41.99	3.63	18.39
"	In bloom	13.70	40.88	3.55	24.14
"	After bloom	13.41	39.05	5.31	25.30
Alsike clover	In bloom	13.59	38.10	3.18	27.20
Mammoth red clover	In bloom	11.96	37.85	3.44	29.90
Bermuda grass hay		7.07	48.04	1.80	25.52
Johnson grass hay		6.60	43.55	2.09	30.26
Natal grass hay		7.38	39.12	1.80	36.72
Bluestem hay		4.73	45.15	1.73	33.07
Smooth brome		9.74	39.55	2.35	30.79
Swamp grass hay		7.69	44.20	2.29	28.13
Eastern sedges		6.05	49.95	1.68	28.98
Western sedges		10.55	44.05	2.17	26.78
Western prairie hay		7.70	43.03	2.50	29.36
Wild oat hay		7.82	43.78	2.73	29.42
Tame oat hay		8.60	42.70	2.86	28.91
Barley hay		6.80	46.00	2.13	28.86
Rye hay		6.56	29.66	2.05	36.73
Wheat hay		6.07	51.54	1.95	24.18

It must be borne in mind that meadow foxtail contains twice as much protein as timothy, one-half more if cut in bloom, and just a little more than that if it is cut when the seeds are fully formed.

When daisies or white top appear in timothy down goes the grade until, perhaps, it is graded as no grade in spite of the fact that this weed contains twice as much protein and almost as much starch, sugars, etc., as timothy and is much lower in fiber.

No Place for Weeds in Timothy or Clover Grades

We all know that a large per cent of high grade hay contains more or less weeds, yet no provision has been made for them without causing a serious lowering of grades. According to present rules there must not be even a trace of weeds in No. 1 timothy, standard, No. 2 timothy, No. 3 timothy, Nos. 1 and 2 light clover mixed, and Nos. 1 and 2 clover mixed and Nos. 1 and 2 clover hay. In fact, according to the present standards any timothy or clover or clover mixed hay containing any weeds whatsoever would of necessity be graded as sample hay.

Many weeds are not relished by stock, and while I am not in favor of encouraging the production of weedy hay, I think that too much really good hay has been rejected simply on account of containing a few harmless weeds. I know of an instance of where an entire car of good timothy was rejected on account of the receiver being able to find one stalk of dock in a bale. It might be mentioned that the market had declined after the hay was purchased. This is a rather far-fetched case, yet, strictly speaking, the receiver was acting within his rights according to the rules for grading.

This chart shows that there must be some other reason, aside from the protein content, that causes farmers to continue to grow timothy exclusively and feeders to continue to create a large market demand for this hay, which is outranked by almost every other kind of grass or legume hay.

Total Digestible Nutrients Indicate the Rank of Hay

The chemical analysis of a plant indicates, in a general way, the value of the plant, but it is necessary to know what per cent of the nutrients are digestible to the animal before one can be certain of the real feeding value.

The total amount of dry matter and digestible nutri-

ents in a ton of the various plants just shown are given in Table 3.

Table 3. Total Dry Matter and Digestible Nutrients in a Ton of Hay (Water content normal)

Kind	When cut	No. of analyses	Total dry matter per ton (lbs.)	Digestible Nutrients Per Ton			
				Crude protein	Carbohydrates	Fat	Total digestible nutrients
Timothy	Av. of all analyses	221	1,760	60	856	24	970
"	Before bloom	7	1,896	94	840	32	1,066
"	Early to full bloom	50	1,744	72	894	24	1,020
"	Late to early seed	21	1,702	48	780	28	892
"	Nearly ripe	28	1,750	44	814	22	908
ANALYSIS OF WEEDS AND GRASSES LOWERING GRADES							
Wire grass	In bloom	1	1,786	56	970	18	1,066
Russian thistle	In bloom	1	1,884	102	628	24	784
Meadow foxtail	In bloom	1	1,864	112	960	34	1,148
Daisy or white top		4	1,814	169	770	44	1,030
Kentucky blue grass		26	1,730	84	870	30	1,032
Crab grass		9	1,810	70	800	20	914
Orchard grass		46	1,768	94	822	36	988
Redtop	In bloom	15	1,840	90	928	22	1,068
Chess or cheat		10	1,832	60	710	14	802
Quack grass		4	1,882	84	994	22	1,128
Meadow fescue		21	1,766	70	904	22	1,024
Western foxtail		12	1,850	80	968	22	1,098
Alfalfa	Av. of all analyses	250	1,828	212	780	18	1,032
"	First cutting	46	1,830	186	780	12	994
"	Second cutting	33	1,854	224	804	14	1,060
"	Third cutting	17	1,822	204	742	16	982
"	Fourth cutting	3	1,680	222	672	14	926
"	Cut before bloom	11	1,876	308	710	32	1,090
"	Cut in bloom	31	1,850	210	770	14	1,012
"	In seed	10	1,792	170	784	20	998
Alfalfa leaves		6	1,868	316	710	26	1,076
Alfalfa stems		2	1,888	36	938	4	992
Red clover	Av. of all analyses	76	1,742	152	786	36	1,018
"	Before bloom	2	1,792	232	762	38	1,080
"	In bloom	18	1,732	162	776	36	1,018
"	After bloom	5	1,558	136	682	52	934
Alsike clover	In bloom	5	1,748	164	728	26	950
Mammoth red clover	In bloom	19	1,626	128	744	36	952
Bermuda hay		14	1,806	74	758	16	868
Johnson grass hay		17	1,798	58	900	20	1,002
Natal grass hay		11	1,804	74	758	16	868
Bluestem hay		10	1,862	48	892	16	976
Smooth brome hay		8	1,830	100	884	18	1,024
Swamp grass hay		37	1,804	70	802	16	908
Eastern sedges		3	1,814	54	836	12	918
Western sedges		45	1,896	138	996	20	1,178
Western prairie hay		42	1,870	80	828	22	958
Wild oat hay		13	1,842	76	856	28	966
Tame oat hay		72	1,760	90	762	34	928
Barley hay		5	1,852	92	964	18	1,096
Rye hay		12	1,828	58	822	22	930
Wheat hay		12	1,838	80	970	16	1,086

Digestion experiments have been made with 31 of the 32 plants shown in Table 2. Table 3 shows that while timothy has made a gain it is very slight over what is shown by the chemical analysis table. The legume hays, clover and alfalfa, naturally head the list as carriers of protein, while Russian thistle, meadow foxtail, daisy or white top, smooth brome and western sedges contain about twice as much digestible protein as does timothy. Wire grass, cut in bloom, Johnson grass hay and western sedges are almost equal to timothy. Bluestem hay contains 12 pounds less per ton of digestible protein than timothy, while all of the rest of the plants shown on this chart outrank it as protein feeds for livestock.

Value of Alfalfa Leaves and Stems

Feeders object to stemmy hay, and most rules for grading discriminate severely against hay that has



D. W. McMullen
Fort Wayne, Ind.

lost an appreciable per cent of its leaves. Here, at least, is one instance of where the chemist can be called upon to uphold the inspector.

A ton of alfalfa leaves contains 316 pounds of digestible protein, while the same amount of alfalfa stems contains only 36 pounds of this valuable and necessary substance. Very little has ever been done to find out the value of fine and coarse timothy, or of timothy with very long heads as against timothy with very short



LYMAN PERIN
President Cincinnati Grain & Hay Exchange

nearby fields, makes a difference of about 2 per cent in the protein content from one year to another in hay from the same fields as is shown by Nos. 3 and 6, which were the crops of 1880 and 1881.

The balance of the samples show that there is considerable variation in the protein content of hay grown in the different states. It should not be inferred, however, that Utah produces the poorest hay. In this case the poorest sample of hay submitted happened to come from Utah.

In fact, it is quite possible that each state will show variations as great as that shown by this chart. The hay produced in any given locality might show some very striking variations in protein content even when all of the hay is of good quality.

A part of our investigational work will be to find out if there is a constant difference in the nutrient content of hay from well defined producing sections. It will require considerable work before we will be able to even make general statements as to the difference in hay from different sections after taking into consideration variations caused by time of cutting and methods of curing.

It is quite probable that hays other than timothy will show variations in feeding value, due, in part, to such factors as soil, climate, altitude, use of fertilizer, age of meadow, etc. In comparing the nutritive or feeding value of different plants, it is customary to use the term "average feeding value," which is obtained by averaging all available analyses. In some instances a comparatively large number of analyses have been averaged, while in others but few analyses have been made.

The object in showing this chart is to call your attention to the standing of some of the well-known hays, and also to some other plants that are not so well known, and because of this fact they have, in some instances, caused market hay to be graded down very materially.

Timothy has long been considered the standard by which all other hays have been compared. Let us see if the chemist agrees with this conception of its value. Of the 32 analyses of plants, shown on this chart, it is found that, as a protein feed, timothy ranks thirty-first or next to the last. In other words, all of the plants exceed it in their crude protein content with the exception of blue stem, which was found to contain 4.72 per cent of protein.

Do Certain Weeds, Wire Grass and "Other" Tame Grasses Lower the Feeding Value of Timothy?

It is a well-known fact that the presence of wire grass and "other" tame grasses lower the grade of

heads. This is another one of the things that we are going to do for the benefit of the feeder.

The Actual Market Value of Market Hay

Practically no work has been done to determine the comparative nutrient value of different grades of the same kind of hay. This is a line of work with which we already have made some rather complete plans to be carried out in the immediate future.

I feel confident that chemical analysis can be used to advantage in determining the comparative value of different kinds of "straight" hays, especially when we have all the necessary farm data regarding type of soil upon which the sample is grown, fertilizer data, age of meadow, stage of maturity when cut, and detailed information as to the effect of method of curing, stacking, etc. While this information should be of considerable interest to feeders, it will not be of particular value to us in the hay standardization work since one cannot place a direct feeding value on all kinds of hay, as is done in the case of wheat where it has been found possible to place a milling value on each grade.

The following table will show some of the difficulties encountered when one attempts to place a money value on the combined nutrients in hay:

Table 4. Actual market value of five kinds of market hay if considering (1) Protein content only and (2) Nitrogen free extract—starch, sugar, etc.—content only. In each instance the entire market price is used to purchase one substance only.

Kind of Hay.	Average market price per ton.	Total amount of protein per ton (pounds).	Cost of protein per lb. if buying protein only.	Total amount of nitrogen free extract per ton (lbs.).	Cost of nitrogen free extract per pound if buying N.F.E. only.	*Actual market value
No. 1 timothy	\$43.25	129.6	10.0	901	4.8	\$16.20
Standard timothy	42.00	153.8	7.8	853	4.9	19.22
No. 1 clover	34.00	193.8	6.45	793	4.4	24.22
No. 1 alfalfa	37.50	390.1	1.25	710	5.28	37.50
No. 1 prairie	26.50	106.8	6.1	889	3.00	26.50
						*If based on protein only.
						*If based on nitrogen free extract only.

*The actual market value of the five kinds of hay as a source of protein is based on the cost of protein in alfalfa hay. When considering nitrogen free extract only the actual market value is based on the cost of this substance in prairie hay. There is no accurate method, at present, of expressing the total nutritive value of different kinds and grades of hay in dollars and cents.

Table 4 has been prepared to give some idea of how market hay compares when all other factors except one are eliminated, something that is not practical to do except in exceptional instances.

These hays are first considered solely as sources of protein. It is shown that alfalfa, selling at \$37.50, is the cheapest source of this substance, which costs 1.25 cents per pound. By multiplying the total amount of this substance contained in each of the hays by the cost of protein in alfalfa, it is found that timothy is the most expensive source of his nutrient. In other words, protein in No. 1 "straight" timothy costs eight times as much as it does in alfalfa. If the feeder desires a hay principally on account of its starches, sugars, etc., the cheapest source is to be found in prairie hay recently quoted at \$26.50 per ton.

It might be well to state that it is not known why standard timothy, in this instance, is better on both protein and nitrogen free extract content than No. 1 timothy, which is considered to be a higher grade of hay.

Why Chemical Analysis Cannot Be Used in Grading Hay

There are some very important factors relating to the actual value of hay that cannot be even touched upon in the chemist's laboratory. He can tell to a fraction of a pound how much of any nutrient a hay contains, but he cannot tell whether stock will eat the hay.

Palatability an Important Factor

In other words, palatability is something that the animal itself must determine. It is a well-known fact that some very nutritious plants are so unpalatable that stock cannot be induced to eat it. In other instances it is like learning to eat olives, some people can learn and some never learn to like their taste.

The palatability of well-known hays can be determined to some extent by the sense of smell. But the most important factor of all is that of color, which is a very elusive factor after all, as is evidenced by the endless disputes over hay which seems to be "line" hay on account of buyer and seller disagreeing as to color.

Reason for Feeding Hay an Important Factor

The one outstanding factor, that has had more to do with the popularity or demand for certain kinds of hay, than all others, is the purpose for which it is fed. The owner of pleasure horses, such as racers, fine driving or saddle horses, is not greatly concerned or interested in the hay having the largest per cent of protein.

He knows, if he is a good feeder, that disastrous results will be had if he feeds alfalfa or clover to a horse that covers the ground at a rapid pace. Consequently he can afford to purchase protein in oats and other expensive feeds which will not injure the horse as would alfalfa or clover.

It is necessary to feed animals a certain amount or bulk daily and here is where timothy comes into its own. A horse will not overeat or founder on timothy. Neither will its wind be affected by this standard hay. Horses at slow heavy work, such as trucking, may be fed alfalfa and clover or clover mixed hay, and the

feeder of such horses should be particular about the protein content when he buys hay. Dairymen prefer legume hays because of the better flow of milk secured from this type of hay.

It is hardly necessary to go further into the reasons for feeding different kinds of hay, as it has been shown that there are other factors fully as important as the chemical factor in relation to the value and market demand for various kinds of market hay.

Suggestions by the Trade Regarding Present Grades

I have tried to tell you about conditions in the hay business and something of the difference in the feeding value of market hays and plants, so that you will understand why all of our preliminary work—the extensive survey—was considered necessary, and also why we are not yet prepared to say just what grades will be used under Federal inspection of hay.

It is a comparatively easy matter to devise rules for grading hay. The other day I reviewed a complete set of grades from a college professor, who hoped that they would be adopted by the Government. After examining them I found that one could not grade a mixture of timothy containing one-third of clover. There was no grade covering this kind of a mixture.

The great difficulty in making grades is to make them so they will be easily understood, will fit the proper kinds and mixtures, be applicable in all parts of the country, and consequently be used by the trade.

During our preliminary survey each person interviewed was asked to express his views regarding present grades and uniform grades. This part of our work was, in some respects, a little disappointing.

Many said that the present grades were all right, but upon questioning them closely we found that they were not using them entirely. I only found one man who was sticking strictly to the rules of this Association. A large percentage of the shippers said that they did not use grades, as they sold hay by description. The per cent of the persons interviewed who could talk about grades without having a copy of the grades before them was surprisingly small.

The general consensus of opinion was that the present rules were all right, but that they were not interpreted the same in different markets or in different producing and consuming territories. A few suggested that there should be a "choice" grade and many thought that there should be a special grade for the hay now being sold as "feeding" hay.

It seems that it is the desire of many hay men to have grades that will classify or describe the hay so that there will be no cause for misunderstanding regarding color, and especially mixture, between buyer and seller.

"Other Tame Grasses" Multiplies Grades by the Thousand

I will venture to say that not one person in this audience has any conception of the real effect of the phrase "other tame grasses" on the actual number of grades it brings into existence in the grades of this Association, or in any other rules for grading hay.

In order to actually and properly grade all of the qualities of hay that is produced in the great tame hay section, it would be necessary, theoretically at least, to have the following grades as regards quality as indicated by color:

Choice, No. 1, No. 2, a "line" grade, No. 3, a "feeding" grade and a no grade.

If we applied such of these grades as might be necessary, according to the mixture and quality, for the different combinations of timothy, red clover, alsike clover, mammoth clover, red top, blue grass, weedy hay, and fine grasses in general, there would be over 7,000 kinds and grades represented. This would not include any prairie, alfalfa or other well-known southern hays.

And the law says that our inspection shall be of such a nature that it will be accepted as *prima facie* evidence by the courts. Is it any wonder that we are greatly concerned over grades when we have to meet the requirements of this law.

Gentlemen, we made the extensive survey and talked with over 1,000 practical hay men, many of whom are members of this Association, in order to get your help in complying with this law passed by the Congress of the United States.

Present Sets of Rules Conflict

Before we can institute Federal inspection it will be necessary to carefully study present rules worked out by those who have had years of experience in the hay business to determine whether all or any part of them will meet the exacting conditions which the law creating Federal inspection imposes.

(Presentation of colored chart showing the grade requirements of 11 sets of rules for grading hay.)

This chart shows graphically the rules of: National Hay Association; Buffalo, N. Y., grades; Kansas state grades; Little Rock, Ark., grades; Ft. Worth, Texas, grades; Washington and Oregon state grades; New York City grades; Galveston, Texas, grades; Memphis, Tenn., grades; Pennsylvania state grades; Denver, Colo., grades.

Prime timothy is a grade that is only used in New York City and Buffalo. It calls for straight timothy. The amount of this kind of hay produced is so small that all other markets have done away with it. It is not an indication of good up-to-date farming to grow this kind of hay except under exceptional conditions, which do not exist on many farms in the timothy belt. Only an export hay grower and maker can make money on the production of this super-quality of hay.

Choice timothy. Seven sets of grades provide for

choice timothy: Buffalo, Galveston, Little Rock, Pennsylvania state grades, Ft. Worth, Denver, and the Washington and Oregon state grades. Little Rock grades require choice to be straight timothy.

There are three variations in the grade requirements:

Galveston, Pennsylvania state grades, Ft. Worth and Washington and Oregon state grades allow 5 per cent of other grasses, while choice hay in Little Rock must be pure timothy, and choice hay in Denver allows one-eighth, or 12.5 per cent, of other grasses. The National Hay Association eliminated this grade some time ago. Before we can have Federal inspection it will be necessary to find out whether there should be a grade for choice hay.

No. 1 timothy grades also show some variation. As regards mixture, the New York City grade is the strictest, while that of Washington and Oregon is the most lenient. No. 1 New York City timothy allows other tame grasses, but will not allow any clover in the mixture, while the Washington and Oregon state grades allow 15 per cent of red top or clover or wild grass or 25 per cent of alfalfa. The Pennsylvania state grade for No. 1 timothy allows one-fifth, or 20 per cent, of other grasses. Seven of the 11 sets of rules have the same requirement for this grade.

The standard timothy grade is only found in two of these sets: National Hay Association and Little Rock, Ark., grades.

No. 2 timothy shows some variation. New York City only allows one-eighth of clover or other tame grasses and the Pennsylvania state grades allow as much as one-third of clover, etc. No. 2 timothy in the Washington and Oregon state grades are the same as for No. 1, but of a lower quality. The remaining seven sets of grades have the same requirements for No. 2 timothy.

No. 3 timothy shows the same variation as that of No. 2.

Future Plans

The plans for studying grades and hay from every important producing section, as a means of selecting or establishing Federal grades, will be outlined by Mr. G. A. Collier, of the Bureau of Markets, who will open the discussion. Mr. Collier is a very practical hay man familiar with all phases of hay marketing, who has, during the last two years, visited practically every large hay market in the country.

A motion was made and carried that the thanks of the Association be given to Mr. McClure for his instructive address.

DISCUSSIONS BY MR. COLLIER

Mr. Collier then took the floor and outlined the plans of the Bureau of Markets on this subject as follows:

In opening the discussion on "The Need for Uniform Grades of Hay," I want to emphasize, if possible, one or two of the points which Mr. McClure has already mentioned:

Need for Uniformity

1. I want to emphasize the need for uniformity of grades. There is no necessity for argument on this matter before this convention, for this is one of the principal things for which the National Hay Association is working. Mr. McClure has shown this need by pointing out some of the many differences existing at present among the various grades being used at the different markets and in different sections of the country. It is obvious that to put into operation a Federal grading or inspection law only such grades or standards can be used that will be applicable throughout the country.

Uniform Methods of Grading

2. Emphasis should be given to the fact that methods of grading should be uniform, and by grading I mean the assigning of the grade and not the physical process properly called inspection. For uniform grading the same factors must be considered for each sample. The most important of these factors are color, texture, and mixture. Mr. McClure has shown that even though the chemical analyses may be of value in determining some of the factors that should be considered in the creation of standards or grades, it is not practical to use them in grading.

What Will the Federal Grades Be?

The important question, then, is—and it is one in which I am sure you are interested: What will the Federal grades be? Will they be the National Hay Association grades?

From a careful study of the data collected during the survey which Mr. McClure told you about somewhat in detail, those in charge of the hay standardization work have come to think of grading hay as a method of identification and classification. The greatest need seems to be for grades or standards that will so classify and identify hay that a buyer can obtain the desired kind and grade of hay by wire or letter as well, or at least nearly as well, as if it were possible for him to come to your well advertised plug tracks here at Cincinnati and buy the hay.

Buyers Order Number One Hay

I think you will agree with me that this is not possible at present. During all my interviews with hay men in practically every large market east of the Mississippi, I can now recall only one dealer who said he would buy No. 3 timothy hay. Almost every other one said they bought only choice and No. 1 grades of timothy or mixed hay. The records of the inspections at the principal markets do not indicate sufficient

receipts of those grades to fill all the orders that must come from these people, but they do show, especially at this time, heavy receipts of No. 2 and lower grades of hay.

Now, as to the use of any of the present grades, it seems evident that some changes at least will be necessary before a certificate of grade based upon them would be accepted in the courts as *prima facie* evidence of the grades, but as to what the Federal grades will be it is not known at this time.

Plans for Standardization Work Completed

Plans for the standardization work are practically complete, however, and the active work toward determining the factors that must be considered in making the Federal grades will be begun upon our return to Washington. A standardization office has been fully equipped and hundreds of samples of hay will be obtained from all sections of the country for use in the work.

Determining Uniformly Recognized Factors

Among the first things to be done is to obtain definite information as to what factors handlers of hay agree upon. The most important of these factors are color, mixture and texture. There is no definite information as to just what extent inspectors agree upon these factors. The only opportunity afforded inspectors to complete their ideas are at such meetings as this convention, and even then there is no way in which these guesses can be checked up and a determination made as to the correctness of the statements of the different men.

Your secretary has kindly agreed to turn over to the Bureau of Markets the samples exhibited here and the standardization work will really be started from them. These samples will be shipped to the standardization office and a determination made as to mixture and other factors for comparison with the estimates made here. I will explain this more in detail a little further along, however.

Co-operation Desired by Bureau

The assistance of every member of this Association is needed and is very much desired, and with proper co-operation it is thought that very satisfactory results will be obtained.

In order to obtain the necessary data as to present grade interpretations, the standardization office has prepared a number of schedules, one for each class of dealers. We will have one schedule to be used by country shippers, one by receivers, one by inspectors, and another by distributors or retailers.

Now, as stated before, we need your assistance, and I believe that your co-operation will be mutually beneficial. Mr. McClure, whom many of you know personally, and who has spent several years in the careful study of hay from many angles, is in charge of this standardization work and invites any constructive suggestions you may have to offer now or at any other time.

Following Mr. Collier's discussion, President Young expressed the opinion that a special committee should be appointed to confer with the Government officials over the matter of grades and on motion the chair appointed to act on this committee George S. Bridge, W. I. Biles, D. W. McMullen, P. E. Goodrich, P. L. Shultz.

The morning session then adjourned.

WEDNESDAY MORNING SESSION

The afternoon session of the second day brought out a somewhat larger attendance than the morn-

ing session. The value of arbitration in business organizations, has become so generally recognized during recent years, that it has developed into an essential element in their existence. The State of New York has placed upon their statutes a law not only regulating, but legalizing arbitration with broad power, thereby encouraging the development of same. The demand for settlement of disputes in various lines of trade through boards of arbitration, had developed to such a degree that other states will sooner or later follow the action of the New York legislature at its last session. Objections have been raised in the past, by parties to controversies, because of the comment and criticism on the part of the Committee, in rendering their decisions, however, so long as same is constructive, it should be encouraged.

Secretary Taylor, is indeed to be commended for the diplomacy he has exercised in effecting so many amicable settlements, and the system he has inaugurated in the preparation of cases for arbitration, which has rendered great assistance to the Committee in their deliberations.

Arbitration has grown to be one of the leading privileges and advantages of our Association, and if continued with the same precautions surrounding it, and in the same broad-minded spirit as in the past, will develop into a still greater factor in trade or-



HARRY E. NIEMEYER
General Chairman of Convention Committees

ganization work. The value of arbitration in business organizations, has become so generally recognized during recent years, that it has developed into an essential element in their existence. The State of New York has placed upon their statutes a law not only regulating, but legalizing arbitration with broad power, thereby encouraging the development of same. The demand for settlement of disputes in various lines of trade through boards of arbitration, had developed to such a degree that other states will sooner or later follow the action of the New York legislature at its last session. Objections have been raised in the past, by parties to controversies, because of the comment and criticism on the part of the Committee, in rendering their decisions, however, so long as same is constructive, it should be encouraged.

Such protest is likened unto a child who resents punishment for mistakes and wrong doing, yet it is true that even business men never grow too old or wise so as not to be able to profit from lessons.

In our deliberations during the past year new angles have been encountered which our Trade Rules did not

acter as to cause differences of opinion, yet the application of genuine business methods, will at least thwart the growth of them, if not reduce same.

REPORT OF TRAFFIC MANAGER

C. G. Burson of Pittsburgh, read the report of the Committee on Transportation as follows:

Because of the very peculiar conditions surrounding the transportation world during the past year, it has been practically impossible to accomplish any constructive changes in traffic problems, but we have been diligent in assembling a mass of data that will be beneficial to this Association in prosecuting proposed changes of material interest to our members, such as:

(a) Bringing about a restoration of the reconsigning privilege that was, until 1917, accorded shipments of hay after they reached the point of first destination. Under the old arrangement cars of hay rejected at point of first destination could be reconsigned to another destination beyond, protecting the through rate from point of origin to final destination, plus \$2. Now, however, cars that are rejected after being placed at first destination, if they are reconsigned to a point beyond, must be charged for at the combination of local rates from point of origin to first destination, and the rate from first destination to final destination, plus \$5. Charge may be saved, however, if the car is reshipped instead of reconsigned; that is, if a new bill of lading is taken out at the point of first destination.

It is appreciated that there is a vast number of cars that for one reason or another have to be reconsigned after they reach point of first destination, and it is felt that when we are able to bring about a restoration of the old arrangement, it will effect a very great saving in freight charges to the members of this Association.

(b) Effecting a change in the rules of the Consolidated Classification so as to provide a carload minimum on hay not to exceed the cubical loading capacity of the car furnished.

This because it has been demonstrated that an ordinary 36-foot box car will not hold 20,000 pounds of certain size bales.

(c) The establishment of through rates via all junction points on basis of the rate in effect prior to June 25, 1918, plus 25 per cent, and without regard to the class rate minimum provided by General Order No. 28, promulgated by the Railroad Administration and being maintained now under private control, contrary to the spirit of the Federal Control Act.

This provision in all tariffs is placing an unreasonable and unfair burden upon the shippers generally, and its abrogation will effect a very considerable saving to the members of this Association.

This department has been furnished with a large number of claims, most of which, however, had previously been submitted direct to carriers and declined, and some were barred by the statute of limitation. However, we are working persistently on all of these and confidently expect to effect adjustment.

Your traffic manager's experience convinces him that a vast sum is lost each year to the shipping public because of failure to properly present and support loss and damage and over charge claims, and strongly recommends that some arrangement be effected whereby all claims be handled through this department, as he is confident that in this way the claimants will be materially benefitted by receiving every cent their claims are worth.

In conclusion, your traffic manager confirms what is generally understood, viz.: That under the provi-



EARL F. SKIDMORE
Hotel Reservations



EDWARD O. SMITH
Registration



D. W. HOPKINS
Entertainment



WALTER J. BUHRMAN
Flag Ceremonies



RALPH H. BROWN
Publicity

CHAIRMAN OF CONVENTION SUB-COMMITTEES:

ing meeting. Immediately following the call to order by the chair, Harry W. Robinson gave the report of the Arbitration Committee as follows:

REPORT OF ARBITRATION COMMITTEE

We beg leave to report that the secretary has referred 27 cases to the Arbitration Committee during the year, for their consideration, all of which have been considered and decisions rendered. Besides these, an unusual number of controversies were set-

cover, therefore, certain revisions are, and will continue to be necessary, in order to meet new conditions in the hay business.

In this connection we earnestly endorse the proposed amendments to our arbitration and investigation rules, to be presented at this convention, and we take this opportunity to warn our membership as to the necessity of complying with same in order to avoid complications such as the Association, through its officers, are called upon to adjust.

While it is true the hay business is of such a char-

sions of the Transportation Act, approved February 28, 1920, the Interstate Commerce Commission has to advance transportation rates to insure carriers a net return of 5½ per cent on the value of the roads, and the United States Supreme Court has subsequently ruled that in determining the amount upon which the 5½ per cent return is to be made, the Commission must figure on basis of present values. This, it is estimated, will cause an increase of approximately 30 per cent over present freight rates, and, as the Government guarantee expires on August 31, it ap-

pears obvious the increased freight rates will become effective on September 1, 1920. Therefore, the Commission will have only six months in which to determine the method and manner of the advance, and as this is a tremendous job, in all probability there will be numerous errors costly to the shipping public, and errors that can only be rectified by subsequent formal complaints to the Commission, for, under the provision of the Transportation Act, the Interstate Commerce Commission, must effect in all instances reasonable rates, and where they fail to do so, they must apply proper remedy upon complaint. Therefore, I urge that all shippers and receivers, members of this Association, keep this department fully informed of all traffic problems, and feel assured we will accord them our faithful attention.

Because of the vast amount of work "dumped" upon the Interstate Commerce Commission by the Transportation Act, and the failure of Congress to confirm the appointment of three new commissioners, it has been deemed the part of wisdom to refrain from presenting formal complaints to the Commission until after September 1, 1920, or until the Commission promulgates rules and regulations upon which the increased transportation charges will be based.

The report of the Nominating Committee was given by W. A. Cutler of Adrian, Mich. The report was accepted and the officers named therein were installed the following morning. They are: President, H. G. Carter of Virginia; first vice-president, B. F. Tyler, Missouri; second vice-president, F. A. Coles, Connecticut.

Directors: Frank Young, Michigan; George Wilcox, Wisconsin; H. W. Smith, Missouri; D. W. McMillen, Indiana; E. H. Day, Massachusetts.

An address was then given on "The Transportation Question" by Clifford Thorne, Chicago.

Mr. Thorne has made this subject a life study. He said that great caution should be used in accepting figures of railroad officials who desire higher rates and gave examples how easy it was to distort statistical figures making them prove almost anything wanted. He thought that when the increased cost of operation was advanced by the railroads as reason for higher rates, there should also be taken into consideration the increased volume of business done by them. He thought also that passenger traffic should share with freight the burden of providing additional revenue and that any increase in freight rates should be based on a total valuation of the roads of \$17,000,000,000. He expressed himself as favoring an advance in rates at this time that was fair and just to all and at the same time advised hay shippers to watch the rates.

Hon. James E. Watson of Indiana, member of Interstate Commerce Committee, United States Senate, spoke of the attitude of that Committee as well as the Interstate Commerce Commission on the question of rates. It was the duty of the Interstate Commerce Committee, he said, to hear all sides and then make its decision. He believed that the Esch Bill was as great a piece of constructive legislation as was passed. Of course there were mistakes in it but the Congress which had the courage to pass it, would have the courage to correct it.

Senator Watson did not believe that the Government could ever successfully operate its railroads. Government ownership would prove costly and at the same time give a less able service. It was always political and would mean 2,000,000 men on the pay roll which would always be a menace and would also always mean an advance in wages just before election. He pointed out that Russia, which was to be the working man's paradise, had become merely chaos and that they were in greater misery in that country than ever before.

The Senator said that the railroads were entitled to more revenue, the amount of which would be worked out by those assigned to that duty. He spoke of the relations existing between the railroads and employes and pointed out that there was not a line in the Esch Bill that could compel a man to work who did not wish to do so. But he said that every man had the right to employ or not employ. Our Congress had the sight to see that interstate commerce should flow uninterruptedly and the Senator expressed his own opinion that it should be deemed a misdemeanor on the part of any one who acted so as to stop this flow.

In conclusion he made a very earnest plea for greater mutual confidence and helpfulness and said these would go far towards solving our national and industrial problems.

On motion by Mr. Robinson a rising vote of thanks was extended to Senator Watson for his attendance and able address.

SECRETARY'S REPORT

Secretary J. Vining Taylor then gave his report as follows:

In submitting this, my eleventh annual report, it is with a marked degree of pleasure, for the fact that when I last reported to you we were just emerging from a World's War, and not only our fair land, but the entire civilized world, seemed tottering, torn and bleeding. I shall not consume any of your time to even touch upon this awful conflict, because every American citizen has been pumped full of this news of carnage, but I shall get right down to business and endeavor to give you a digest of the activities through our office during the past 12 months.

This has been a very unusual year in the hay business. The markets were never safe for future trading, and there has been no incentive for any one to sell or buy ahead. We were treading on dangerous ground when we got beyond the hand-to-mouth demand and supply condition, but with all that, there has been money made. Still, in a few instances, some of our members have been badly burnt.

We entered into the year's work under splendid conditions, and with a man at the helm who knew how to do things. When we started out with the new crop of hay we found the markets pretty well cleaned up and very little hay back in the country, which made trading a pleasure. Unfortunately, however, there was not a large crop of timothy and a severe shortage of clover, but with all, I think we have had enough to go around and no one has suffered. Hay has reached one of the highest levels known for many, many years, which, of course, was in keeping with the rapid increase in price of all feeds, clothing and other materials and necessities of life.

The Growing Crop

We learn that on the basis of May 1, estimate, the crop of 1920, if it fully matures, will amount to 111,790,000 tons, compared with an estimated production of 108,666,000 tons in 1919. Stocks of hay on farms May 1 were estimated at 11,377,000 tons, against 8,559,000 tons May 1, 1919. Therefore, according to the Government's figures, we will have the greatest yield on record.

Timothy alone will amount to about 20,000,000 tons; timothy and clover mixed, about 20,000,000 tons. The Canadian production of all kinds of hay will run about 12,000,000 to 15,500,000 tons. The maximum Canadian exports about 700,000 tons.

Canada is the only competitor in the domestic hay markets. Under normal conditions nearly her entire surplus is shipped into the States. The value of imports in 1918 amounted to over \$4,500,000. The present duty on hay from Canada is \$2. The Canadian duty is somewhat higher, however, as it is based on a ton of 2,000 pounds, while the American unit for a ton is 2,240 pounds. Mexico and the United Kingdom are practically shut off on account of quarantine regulations. Imports from these countries must be disinfected on board vessel or conveyance at expense of the owner and stored in quarantine for a period of three months. Naturally, you can see that such restrictions are prohibitive. Therefore, we learn that the imports from Canada in 1919 were 276,308 tons; from all other countries in 1919, 1,140 tons; exports from the United States to all countries for 1919, 28,898 tons; shipments to Canada and the Philippines appear to have originated in the Pacific States.

Strange as it may seem to some of you, only between 8,000,000 and 10,000,000 tons of the enormous amount of hay produced in the United States enters into commerce and trade. The balance of this production is consumed on the farms where grown and in nearby centers. I sometimes wonder if the hay men ever stop to think just what a tremendous amount of capital is required to handle this crop, to say nothing of the large number of experts required to carry on this line of business.

Future of the Hay Trade

It is needless to note the marked changes in the hay business which have come about during recent years on account of the mechanically drawn vehicles. Not only are the demands and outlets of the city market gradually changing, but the marvelous interest displayed and development in agricultural education is timely to revolutionize the kinds of hay produced. The demands of fertility of soil is becoming realized as a necessity of our nation, as producers of farm products, would increase the production in proportion to our increase in demand and consumption.

In respect to hay, scientific investigation shows the loss of fertility in growing a ton of timothy is between \$3 and \$4 per ton greater than the production of a ton of clover. And furthermore, the actual food value of a ton of timothy is less than that of a ton of clover. Therefore, the change in demand will come after the feeder is educated to these facts, and

perhaps it will have to be forced upon him by a greater premium being placed upon timothy than at the present time. But statistics show that the acreage of timothy is decreasing and that of clover increasing each year. Under ordinary circumstances the business of both shipper and receiver need not be affected by this.

I give you these facts only as a timely warning of the changes that I know are coming to pass in the hay trade, and we should not try to avert them because they are for our best interest as a nation.

Railroads

June 1 we filed protest with the Interstate Commerce Commission against the priority system. We also urged our members, through *The National Hay Press*, to:

1. Load all cars to capacity.
2. Expedite the loading and unloading of cars promptly, and releasing them accordingly.
3. To order only such cars from the carriers when and as they are needed.
4. Use trucks for transfer and terminal service when possible.

There has been considerable agitation through the press and other mediums for the introduction of a priority system. We felt that the dangers and complexities that would naturally arise from the introduction of even a rudimentary priority system would not be best for the interests of the hay trade, and would inevitably result in serious disruption of many industries. We again urge our members to co-operate with the Interstate Commerce Commission in their attempts to relieve the present railroad situation.

My experience for the past year has been that there never was a time when so many contracts were unfilled and allowed to lapse, and in many instances canceled, owing to the fact that sales were made for futurer delivery, subject to car supply. This, naturally, created an enormous amount of work for our office as well as your Arbitration Committee, and the worst of it all is, we do not yet see any immediate relief. The railroads are back in the hands of private owners, but they were put back in such a depleted condition that it is going to take 12 to 18 months to build order out of chaos, and especially to replenish their rolling stock.

Membership

I shall say but little in respect to our membership, lest some may think that we dwell too much on that phase of our work, but in passing I want to say that unless we can keep up the increase and growth of our organization, by adding new material from year to year, we cannot keep pace with the increased cost of maintaining this Association. Therefore, it is with considerable pleasure that I inform you that we have a net membership, July 1, of this year, of 1,739.

The Association Grades and Approved Inspectors

We are glad to inform our members that during the past 12 months 10 inspectors have been examined and approved. This gives us 29 inspectors at the present time. When we started out last year, it was with the hope that the past 12 months would develop some scheme in the inspection of hay by and under the control of this organization. It is true we have made wonderful progress in the past two years, but there are many others who are not using our grades, nor a system of inspection that we encourage, but reforms of this kind do not come with a rush, and among conservative business men, old, familiar usages are not put aside in a day.

This question of inspection and grades we will have with us always until it is settled and settled right. The inspection of hay should be taken entirely out of the hands and influence of the buyer and seller alike, and should be under the absolute control of some disinterested party, preferably our Association, and this, gentlemen, is one of the reasons why I believe that the Government is today making such extensive investigations, and, as I take it, with a view of stepping in and taking a hand.

Reciprocal Demurrage

Your secretary has always maintained that if it be a crime for a shipper to unnecessarily detain a car for loading or unloading, it is no less a crime for the carrier to do likewise. We are told with reassurance that the increased demurrage charges were made for our benefit. If this be true, let the benefit extend to the roads in the form of a national reciprocal demurrage law. We have been told that the average number of miles traveled per day by a freight car is between 26 and 30 miles. The shipper has no control over this, and the carriers have no right to adopt a policy of operation, however profitable it may be, that might result injuriously to the public.

If I have not been misinformed, demurrage is regulated by statute in 12 or 14 states, and in some 20 odd states it is regulated by commissions. What is known as reciprocal demurrage is in force in several states, but in a measure it is almost meaningless as it does not go far enough. It is a national demurrage law, which shall be reciprocal in its operation, that is badly needed, and I seriously recommend this to our incoming Transportation Committee.

The National Hay Press

The *National Hay Press* has developed far beyond our fondest dreams. There is no need of my sounding cymbals or blowing trumpets in behalf of our little publication, because I think its actions speak louder than words. We commend it to your careful consid-

eration 12 times each year. We beg most earnestly for your contribution to its columns, which are open to every member of this organization. To make this a real, live issue, full of pertinent facts and "pep," there must be an exchange of ideas and opinions.

Personal

It has been my extreme good fortune as well as honor to work with 11 presidents. From year to year it does not seem possible that they could be as good as they have been. It would seem that now and then we would strike a bad one, but this has not been my experience. If I should line up before you here today the 11 wonderful men, under whom I have served, and who have been so patient, charitable and kind to me, and you were to ask me to pick out the best one in the bunch, I think I can truthfully say to you that it could not be done.

Mr. Young, your chief executive, a man in whom you entrusted the welfare of this organization at the last convention, has proved himself worthy of your confidence. As a layman or a member in the ranks, it would be impossible for you to know Mr. Young as I do, as I have worked with him—you would have to get into the activities yourself. Never too busy with his own private affairs to come or go when we asked him, with a thought of the Association's welfare and interest uppermost in his heart, continually striving to devolve some ways and means for the betterment of the trade as a whole. He has been found fully equal to every emergency, and has served you with honor and distinction. I have learned to know Mr. Young during the past 12 months better than I ever knew him in all my previous years' acquaintance with him, and I feel it only a just tribute to this man, who has served you for love and honor only to say that he has not failed you in any single degree.

To the other officers, committees and all those who have contributed so much in the wonderful success and growth of this organization, I pay tribute. As I have stood before you men year after year, and told you what we wanted you to do, you have listened with patience. It was not the yelpings of an idle tongue; it was for your interests, and yours alone, and I say to you again for the "forty-leventh" time that this organization is what you make it, and you get out of it just what you put into it.

To my office force, words do not flow as I should like when I know of the efforts they have put forth, the sincerity and loyalty they have exhibited, and especially with my peculiarities and shortcomings. Without them, I should have failed. I feel it only just, and I say to them in your presence, "Well done, thou good and faithful servants."

I feel it only just and proper at this time to publicly and with pride pay tribute where it is deserved—to my stenographer, Leone Rose, who started in my office when I first became your secretary, and from that day until this has served you most faithfully; never failed us for a moment; has been equal to any occasion demanded of her, and with a willing, pleasant, cheery manner of doing it. She is leaving us now, which is her right to do, and her duty to her husband, and to repay her for what she has done for this organization, the best I can say, before you men, is that God bless and keep her.

And in closing, if you will dwell with me just a few moments longer:

I am aware that no weak words of mine, no studied thought or truthful eulogy, can add one cubit to the stature of this organization's fame, yet no treatment of hay in history is worthy of your attention or will be of lasting value, unless the ultimate product of the hay business is considered, the genius of evolution, your organization—the National Hay Association.

Our task will never be completed until the last defective bale is loaded in the car and the last hay man has discovered that it is no longer profitable to try "to put something over." I believe there is more in the minds of the men who attend these meetings than the correction of abuses. There are more aims than the establishment of uniform grades; I believe that the officers of this Association have always been inspired by high purposes and lofty motives, and that the character of the hay business, represented by your Association, has been molded by men of sterling caliber.

In the realm of science, there is no stationary state. Every part of every atom of every rock-ribbed mountain, every molecule of every drop of water in every ocean, is in constant vibration. The world swings around the sun, and the sun toward the North star. Opportunity moves forward and your destiny is in her course as unfettered by affiliations, with every man an equal member and every member an honorable gentleman, you continue toward the mark of the high calling of this organization.

Secretary Taylor also presented a financial statement for the year, showing receipts from all sources of \$35,626.94, and disbursements of \$16,662.52, giving a balance on hand of \$18,964.52, as compared with \$10,688.22 at this time last year.

Before adjournment Donald J. Kays, Department of Animal Husbandry, Ohio State University gave an address on the "Horse" showing its important place in the industry of the city and on the farm and predicted that this place would grow in im-

portance as the horse could never be eliminated, but on the contrary should grow in favor in the active life of both city and country.

THURSDAY MORNING SESSION

The final session on Thursday morning was opened with the report of the Memorial Committee.

MEMORIAL ADDRESS

The presiding officer called upon J. L. Schultz, of Syracuse, N. Y., for the Memorial Address, in commemoration of the members of the Association who passed away during the last 12 months.

Mr. Schultz responded feelingly, paying sincere tribute to the deceased members of the Association and giving a brief sketch of the lives and activities of each. The loss to the Association by death during the past year included the following members:

Frank Dobney, Stuart, Neb.; John B. Smith, Weedsport, N. Y.; Jacob Guiss, New Washington, Ohio; J. M. Williams, Memphis, Tenn.; Ganthus Peters, Kansas City, Mo.; E. P. Palmer, Omaha, Neb.; W. J. Overocker, New York, N. Y.; R. D. Holloway, Newport News, Va.; Albert Todd, Owosso, Mich.; David Radcliff, Stuart, Neb.; John C. Liken, Sebawaing, Mich.; George L. Bobilya, Fort Wayne, Ind.; A. W. Cheney, Springfield, Ohio;



INSPECTOR GEO. F. MUNSON AND SECRETARY D. J. SCHUH

A. F. Carter, Bay City, Texas; John Scott, Montreal, Que.; Chas. L. Schmancke, Charleston, S. C.; A. M. Smiley, Urbana, Ohio; J. W. Doon, Worcester Mass.

D. S. Wright, of Weedsport, N. Y., made the report on the oBard of Directors which advocated an immediate increase in both freight and passenger rates; that two traveling inspectors be employed by the Association; that the acquirement of a traffic manager in connection with the secretary's office would be a great asset to the Association and that the dues be increased to \$15 per year, effective July 1, 1921. The report was adopted.

Geo. S. Bridge of Chicago, next introduced a resolution against Government interference in the inspection of hay, asking that a committee of three be appointed to secure the elimination of hay from the act regulating inspection of food products inasmuch as hay is not a perishable product. The resolution carried after much discussion.

Next in order came the question of changes in the Association Trade Rules. Changes advocated in Rules Nos. 3, 5, 6, 7, and 13 were adopted.

The report of the Grades Committee was then presented, and after much discussion was adopted with the elimination of proposed changes on timothy hay.

The report of the Nominating Committee was unanimously accepted and the officers duly elected. The new officers were then installed and the convention adjourned *sine die*.

THE ENTERTAINMENTS

All the visitors left Cincinnati with the consciousness of being highly instructed and benefited by the business sessions of the convention and also with the memory of a most enjoyable time while guests of Cincinnati and the Cincinnati Grain and Hay Exchange. In the first place the Exchange held open house during the three days meeting and special facilities were afforded on Thursday

morning for visiting and seeing in operation its plugging system now grown to be an important feature of that market.

On Tuesday afternoon, the steamer *Island Queen*, under good Captain Patterson was boarded by the delegates at 1:30 o'clock and a 32 mile ride taken on the Ohio River. Luncheon was provided for all on board the boat and there was music for dancing above and a full band below deck. The weather was delightful, a full breeze blowing and altogether it proved a most enjoyable occasion.

On Wednesday afternoon the ladies of the convention were taken on an auto tour of the city visiting the famous Rookwood Pottery establishment and other points of interest ending with a luncheon at the Zoological Gardens.

The banquet was given at the Gibson Hotel at 7:30 o'clock on Wednesday evening with both ladies and gentlemen of the convention attending. Practically all of the grain and hay merchants of Cincinnati with their ladies were present to greet the visitors and give that home feeling so important on an occasion of this character. The tables were beautifully decorated with emblems and flowers, and music and songs added to the enjoyment of one of the most brilliant gatherings that ever met beneath the Gibson roof. Dr. W. A. Ganfield, president of Center College, Danville, as the speaker of the evening gave an inspiring address on "That Boy of Yours and That Girl of Mine," depicting how the youth of this country may grow to be brave men and women and useful citizens and keep the banner of the hay trade nobly aloft as had their fathers before them.

HANDLING WHEAT IN AUSTRALIA

The American consul at Adelaide, Western Australia, recently furnished a description of the progress which bulk handling of grain is making in that state. The story appeared in an industrial journal of Australia and was as follows:

Two years ago a bill to provide for bulk handling was thrown out by the Upper House in Western Australia because the Country Party, although in favor of bulk handling, did not want the Government to undertake the work of establishing and operating the system. The farmers then set about inaugurating a system owned by themselves. Mr. Basil Murray, managing director of Westralian Farmers (Ltd.)—the chief farmers' co-operative society in the state—called a conference of wheat growers and placed before them a scheme whereby a purely farmers' bulk-handling system could be created by a grain growers' co-operative company which every farmer in the state would have full opportunity of joining. The conference was held and 527 farmers' representatives attended from all parts of the district.

Expert grain-elevator engineers had computed the cost of such a scheme at £900,000 to £1,000,000 (say \$4,500,000 to \$5,000,000) and the farmers at the conference agreed to subscribe £250,000 (roughly \$1,250,000) in cash for the purpose of carrying out the enterprise. The method of raising the money suggested by Mr. Murray was that each farmer should allocate from his future dividends in the 1919-20 wheat pool 6d. (\$.12) per bushel, which sum would more than raise the amount. If necessary, the farmers were prepared to furnish a further sum in 12 months' time. The £250,000 will be invested in the proposed elevator company and will carry interest at the rate of 7 per cent.

Following the conference a deputation waited on the Premier and asked that the Government make available the necessary railway sidings and sites, and wharves at Fremantle, Geraldton, Bunbury, and Albany; that the rolling stock be gradually adjusted to meet the new methods; that an act similar to the Canadian grain act be passed, and that provision be made for Government supervision of the grading and classification of wheat. The Premier expressed himself as being entirely in favor of the movement and gave a sympathetic reply.

FINANCING THE GRAIN CROP

BY B. S. BROWN

The attitude of Kansas City bankers toward financing southwestern country bankers and grain dealers for the present harvest is encouraging in the face of past predictions of Kansas and Oklahoma bankers regarding the tight money market in the wheat belt. Though at this time grain drafts have not reached Kansas City bankers it is the opinion of big local financiers that grain drafts on demand will be cared for. City banks have had to assume the additional burden for their correspondents and to relieve this strain Kansas City bankers are doing their best to get cars to shipping points in the grain belt. If the present crop is handled promptly by the railroads large amounts of credit will be released which will relieve the present money stringency.

The attitude of local bankers is in favorable contrast to the communication issued by the State Banking Department of Oklahoma on June 7, which says in part, "The harvest season of 1920 is at hand and the bankers of this state are confronted with a condition which they have never had to meet before. The transportation facilities are not to be relied upon, therefore it will be impossible for you to finance the local grain buyers. You will not be given credit for grain drafts with bill of lading attached by your city correspondent. Credit is almost impossible to obtain in the central reserve cities and it is very necessary that you do not tie up your cash and sight exchanges by permitting local grain merchants to buy up large quantities which they will be unable to move and convert into cash. It is necessary that the farmer be assisted with this crop. The necessary expense

ciation, represented the Kansas City banks at Topeka recently at a special meeting called in an effort to get more cars.

At this time the grain has not begun to move from the points of shipment in Kansas and Oklahoma. Local bankers expect grain shipments about the second week in July at which time the finances of all southwestern banks will be tested to the utmost. It is in preparation for this time that the bankers of Kansas, Missouri and Oklahoma have been urging the importance of sufficient cars in the wheat belt. Many thousand bushels of last year's crop are still in the elevators and with the accumulation of the present harvest the strain on credit is the greatest in years. Wheat paper which has usually a rapid turnover with the movement of each year's crop has become a frozen credit due to the break down of transportation. Many bankers are urging that the farmer not try to move the present crop but build suitable storage. To quote the "Exchange Review" monthly letter of the Exchange National Bank, Tulsa, Okla., in its June issue, "There are 4,250,000 bushels of wheat stored in the elevators of Oklahoma. The percentage of last year's crop now in the state is larger than usual for this time of year. With the 1920 harvest commenced in the southern sections of the state the breakdown in transportation demands immediate arrangements on the farm for the proper storage, as public elevators will not hold more than 20 per cent of the crop."

A COMMUNITY AFFAIR

Eastern Washington is a great grain country and within the past few years has gone into livestock on an ever increasing scale. There has been



PLANT OF MEDICAL LAKE (WASH.) GRAIN & MILLING COMPANY

money for the harvest and assistance to provide storage facilities for the crop should be extended to the farmers."

Kansas City banks, on the other hand, through the Kansas City Clearing House Association are exerting their best efforts to assist the country banker, grain dealers and farmer. The Association is communicating with the railroads and with the Interstate Commerce Commission to get more cars to points most needing them. By means of circular letters to country correspondents, the Association has listed the shipping points for wheat in Kansas and Oklahoma and the amount of cars needed by each. A copy of these lists has been sent to the railroads operating in this section with the suggestion that cars be sent to the points indicated in the amounts needed. The Clearing House Association has received the co-operation of the Interstate Commerce Commission in this distribution and though no direct report has come from the railroads to the Association offices, Secretary C. W. Watson says country bankers have reported arrivals at needed points.

The Association has also sent committees to Chicago, Washington and other eastern railroad points to assist in getting cars to care for the present crop. G. M. Smith, chairman of the Board of the Commonwealth National Bank and president of the Kansas City Clearing House Asso-

a growing demand for mill feed and flour in the community as well as an urgent need of an elevator to handle the surplus grain. With these conditions patent to everyone, it remained for J. F. Goldback, a jeweler of Medical Lake, to take the initiative in providing a home industry to take care of this busy Washington neighborhood. Last April he organized the Medical Lake Grain & Milling Company with 118 subscribers for the \$50,000 of stock. Eighty per cent of the stockholders are grain farmers, so that the success of the venture is pretty well assured as there is plenty of grain to make a profitable business from this source alone.

The elevator consists of a wood head house and five concrete tanks. The head house has eight tanks which, with the storage bins, has a total capacity of 35,000 bushels. The receiving capacity is 2,000 bushels per hour and the shipping, 1,500 bushels.

An oil control dump with a 10-ton Fairbanks Scale receives the grain and a four-bushel Fairbanks Automatic weighs out. The tanks are fed through spouts from the top of the house, and a conveyor belt, about 100 feet long brings the grain back to the elevator.

Power used is electric, the current coming from Big Lake on the Spokane River, 40 miles away. One 20-horsepower Fairbanks-Morse Motor with rope and chain drive distributes the power.

THE COST OF GROWING WHEAT

The cost of producing wheat of the 1919 crop was as low as \$1 a bushel on just two farms out of 481 included in a cost of production study just completed by the United States Department of Agriculture. On 20 farms it was \$5 or over. The bulk of the farms produced wheat at a cost somewhat less than midway between these two extremes. The average cost per bushel for all farms was \$2.15. At such a price half the farmers in question would have lost money on their wheat.

Fourteen representative districts in the Wheat Belt were visited by the field men of the Office of Farm Management in making this investigation, a preliminary report of which has just been issued. Nine winter wheat areas were surveyed in Kansas, Nebraska, and Missouri, and five spring wheat areas in Minnesota, North Dakota, and South Dakota. For winter wheat 284 records were taken, for spring wheat 197.

In the winter wheat area costs ranged from \$1 a bushel for two farms to \$8.20 on one farm. The average cost was \$1.87. If the price received had been \$1.87 more than half of these winter wheat growers would have produced wheat at a loss.

In the spring wheat areas the average cost was much higher—\$2.65—the range running from \$1.10 for one farm to \$5 or over for 17 farms. If the price received had equaled the average cost, between 50 and 55 per cent of these spring wheat growers would have failed to break even.

Yields averaged 14.9 bushels per acre for the winter wheat farms, and 8.4 bushels for the spring wheat farms, and the cost per acre \$27.80 for winter wheat, as against \$22.40 for spring wheat.

Department specialists, in cost of production studies, point out in this connection that, for the farms covered in this investigation, the so-called "necessary price"—that is, the price necessary to give the producer a fair degree of certainty of making a profit—would be found at a level considerably above that of the average cost of production. For example, to allow a profit on 80 per cent of the wheat produced on the farms covered by this study, the price would have to be about \$2.60 as compared with an average cost of \$2.15. At a price covering the average cost plus 10 per cent, 75 per cent of the crop would be covered, but 40 per cent of the growers would still fail to break even.

The variation in net cost per bushel for all farms—both spring and winter wheat—is shown in the accompanying table. Copies of the preliminary report on the cost studies, which tells how the work was done and gives results in some detail, may be obtained from the Office of Farm Management.

VARIATION IN NET COST PER BUSHEL OF SPRING AND WINTER WHEAT, 1919, 481 FARMS

Net cost per bushels.	Number of farms.	Seeded.	Harvested.	Production bushels.
\$1.00	2	770	770	14,560
1.10	4	950	950	19,212
1.20	5	480	480	8,660
1.30	9	2,144	2,144	40,692
1.40	10	2,152	2,137	41,458
1.50	21	3,199	3,171	61,642
1.60	21	3,723	3,673	60,526
1.70	26	4,696	4,649	69,230
1.80	25	5,254	5,169	78,691
1.90	38	5,662	5,618	86,283
2.00	33	5,377	5,192	76,143
2.10	30	4,027	3,942	48,895
2.20	25	3,677	3,611	42,850
2.30	21	6,312	6,202	65,250
2.40	22	3,524	3,491	35,056
2.50	19	3,407	3,262	33,558
2.60	18	4,988	4,818	41,045
2.70	23	4,302	4,137	37,599
2.80	13	1,584	1,556	13,678
2.90	9	1,910	1,910	15,804
3.00	9	1,235	1,185	9,263
3.10	7	990	925	7,779
3.20	5	1,010	930	6,241
3.30	8	1,729	1,638	11,053
3.40	6	1,510	1,485	9,726
3.50	8	1,730	1,705	10,201
3.60	5	880	880	5,330
3.70	4	521	521	3,185
3.80	5	1,210	1,162	6,561
3.90	6	760	735	4,206
4.00	..	..	..	..
4.10	3	484	440	2,983
4.20	4	605	605	3,455
4.30	3	530	530	2,641
4.40	3	630	630	3,170
4.50	3	760	760	4,402
4.60	3	410	405	1,806
4.70	3	500	500	1,598
4.80	..	..	..	..
4.90	2	171	151	970
5.00	2	430	280	1,567

Eighteen records representing 0.9 per cent of the production had costs exceeding \$5. Average cost, \$2.15.

ASSOCIATIONS

ANNUAL MEETING OF FEED MANUFACTURERS ASSOCIATION

On June 17 and 18 the American Feed Manufacturers Association met at the La Salle Hotel, Chicago. So well attended was the meeting that badges gave out and there was a general scramble for banquet tickets. But everyone was taken care of and the meeting was the best that the Association ever held.

PRESIDENT ABBOTT'S ADDRESS

President Harold A. Abbott of Chicago opened the meeting and delivered his annual address, as follows:

Once again the feed manufacturing interests of the United States convene in convention, this the twelfth annual meeting of the American Feed Manufacturers' Association. As your president, I greet you, and it gives me satisfaction and courage to perceive the genuine interest taken in these gatherings as well as the welfare of the organization.

Whatever may be our individual opinions in regard to the many perplexing problems of the trade which are presented for solution from time to time, one fact most certainly must not be overlooked: that "In union there is strength."

From an infant to a giant of industry the feed manufacturing business has developed in the past 20 years. It is not strange, therefore, that our troubles and anxieties from many angles have tried our patience and at times placed a burden of financial strain and trade obligations almost unsurmountable. Fortunate we are, though, that strong, farsighted and capable men have risen to the defense and support of a much abused and misunderstood industry. Their efforts have drawn much of their time and strength, but it has been such self-sacrifice that has made it possible for the industry to avoid dangerous pitfalls during times of emergency when quick action was necessary to preserve the balance and equilibrium of sound and well established customs.

I cannot let an occasion of this kind go by without thus paying homage to those that can and do. The co-operation of those that have lent a helping hand is appreciated and their good works will not in the long run be cast aside and forgotten.

The broadening field and logical opportunity presented by the feed manufacturing business has led to many new firms entering the lists to compete with keen rivalry their predecessors' trade, as well as create new adherents to the use of mixed feed. Seldom does a new firm enter the market but what its very presence stimulates trade and gives a boost to the business. That is assuming, of course, it is intelligently guided by a knowledge of the business and an intent upon upbuilding its trade for profit and perpetuity. If either purpose is sacrificed, it becomes a sin to the stockholder as well as a setback to our social stability.

We are finding also since the war an expansion by several well established houses, so as to take advantage of other market centers to lessen cost of production for distribution into new areas of operation, or, if into previously worked territories, this expansion paves the way for a more direct contact between producer and consumer, eliminating surplus haulage, thereby serving their customers more efficiently, more promptly, and more economically. These are trade factors well worth considering during these times of high wages and probable increase in freight rates.

The "High Cost of Living" is not an idle phrase even though it is caricatured and joked of so frequently, but on the contrary is so much of a reality its effect is felt in every walk of life and our attention and thought is focused on the subject almost hourly. So acute has become the situation, it is a grave problem and threatens to shake the very foundation of our national institutions.

Business everywhere should follow a conservative policy during these trying times, and reflect the confidence which must ultimately survive. Lost motion must be eliminated, economics practiced and unnecessary speculation avoided. War has left us an inheritance in the matter of extravagance both public and private which, for the safety of the future, must be curbed and orderly reduced to prevent a panic and its resultant consequences.

Mixed feed manufacturing is an essential industry, distinctly a necessity, and a most important link and powerful factor in conservation. Its highly experienced purchasing forces, up-to-date methods of conversion of raw materials, blending facilities and merchandising organizations, have proved itself indispensable to our economical agricultural livelihood and stability of trade relationship between producer and consumer.

The cost of existence, if you please, can be reduced by frugality, self-denial, and the increased production of necessities, and the proper curtailment of non-essentials, and proper distribution of labor.

I once heard a lecture by an eminent astrologist who prophesied that some day all mankind would fight a common foe—starvation. A life study he and others had made of the planet Mars had convinced him that the huge canals discernible through the telescope were the last vestige of a fast disappearing population dependent upon its water supplies for irrigation from the melting ice of the North and South Polar regions.

We at least can postpone such an evil day by the proper reclamation and cultivation of neglected lands, intensified farming and the efficient interchange of surplus production from one section to another. The finality, of course, is food for man and beasts of burden. As domesticated animals outnumber our population and their eating capacity larger and character of goods bulkier, the problem of feeding them becomes proportionately greater and more complicated. The feed manufacturer, therefore, can make himself an economic necessity and a service to the community by painstaking effort in methods of manufacture and distribution.

The feed industry is unfortunately confronted at the moment with a general inability to produce in the same proportionate volume as in the past. This, however, is not peculiar to the feed business, as today it

is found in every endeavor where the element of labor and transportation cuts so great a figure. The serious freight conditions resulting from greatly curtailed efficiency of the railroads is one of the greatest handicaps to be met. These resultant consequences have been so far-reaching at times during the past year, that the business man is almost overwhelmed in his endeavor to continue operation upon anything like a profitable basis. More than that, parts of the country oftentimes are in such dire need of supplies that irrespective of prices, the physical obstacles have made it entirely impossible to come to their rescue as promptly as should be possible.

And again, we are burdened by the inadequacy of facilities for solicitation of business, either in the procurement of experienced sales representatives or they are, in turn, embarrassed and hampered by passenger service, hotel accommodations, telephone, telegraph and in fact postal deliveries. These all are contributing factors and should be improved rather than be allowed to continue to hinder a sane, safe execution and expansion of business enterprise. It is well to bear these matters in mind rather than attempt evading them, because it is only through the constant pub-



HAROLD A. ABBOTT
Retiring President

licity of such weaknesses that proper correction can ultimately be brought about. It is highly important that feed manufacturers should lend their support to all constructive measures which may ultimately lead to their correction and improvement, not alone within their ranks, but between themselves and their customers and likewise the business representatives of the nation. You are often called upon through your trade associations or local commercial association to support important measures being introduced in Congress by the United States Chamber of Commerce, and it is to your interest to see that proper consideration is given to all such subjects, as many of them are vital to you, either directly or indirectly.

I will leave for the chairman of the Executive Committee and the secretary a statement of the legislative and business progress, and other activities during the past association year. You will also hear direct from our traffic manager with a brief resume of what he has accomplished in that newly created position which was inaugurated during the past winter. The increasing difficulties of railroad transportation and freight problems of one kind or another seem to justify the establishing of such a service which can be of so vital assistance to the membership in general. There are, as might be expected in so varied a membership, some conflicting interests, but if a little forbearance and unselfish consideration is allowed to guide the verdict of our opinions, I believe much good can be accomplished for all. Personally, I feel the Association can well be proud and consider itself fortunate in securing the services of so able a man as spokesman in matters of such technical character as present themselves in transportation problems.

REPORT OF EXECUTIVE COMMITTEE

George A. Chapman, chairman of the Executive Committee, gave the following report of the Association affairs for the past year:

The year which has elapsed since this Association got together in St. Louis last June has been one full of importance to the Association and to the feeding stuffs industry. It has probably been the most important one in the Association's affairs since it was organized. When we were together last year we were somewhat apprehensive as to what the outcome of the following period might be. We were just through with the war and were entering upon what most of us thought would be new conditions and readjustments of values. We can congratulate one another upon having passed through another successful year for the industry. Were it not for the serious railroad situation we would all be here today in a happy frame of mind. While we are still looking

forward to readjustments, we look to the coming year with much more confidence than we did one year ago. Readjustments must and will come, and while they have not come, and probably will not come, as rapidly as we had expected, as an association and as individuals we must make our plans for the future carefully and with foresight.

Long Contracts and Price Guaranty

At our convention last year, resolutions were adopted condemning as unsafe and bad business practice the long-time contract and the price guaranty, and the Executive Committee was instructed to endeavor to prevail upon manufacturers making such contracts to discontinue. For a time it seemed as though as a result of these resolutions the long-time contract and the price guaranty had been started on the road which has been traveled by so many unsound business practices and would become things of the past, to be looked back upon in wonderment that they ever existed. The Executive Committee received no complaints that such contracts were being made until well into the fall of 1919, when reports began to come in that certain manufacturers were both making long-time contracts and guaranteeing prices against decline. The Executive Committee, in accordance with instructions of the convention, used its best efforts to prevail upon manufacturers reported to be making such contracts to discontinue the practice. In some cases the requests were complied with and in others not. A number of manufacturers held firm to the principles embodied in the resolutions until they found competitive conditions forced them to make such contracts or lose established trade. Others, in a most commendable spirit, stood pat and saw their trade go to competitors until in exasperation they, also, were forced to make such contracts. The Executive Committee reports its inability to accomplish much in the elimination of these undesirable practices; however, our general impression is that there has been during the past period less guaranteeing of prices, and, generally speaking, contracts have been made for a shorter period of time. In view of today's prices which are even higher than the prices of one year ago, it would seem as though the long-time contract and the price guaranty were even more undesirable now than ever before. The Executive Committee desires to make it clear that the resolutions referred to merely expressed the sense of the convention, and no one was in any way committed to discontinue the practice and no discredit rests upon any member who felt that it was good business for him to use such methods. Such resolutions must of necessity be only suggestive and not obligatory.

National Legislation

In view of impending national legislation to regulate the feeding stuffs industry and because of an evident division of opinion in the Association as to what the nature of such legislation should be in so far as it would apply to the showing of the percentages of ingredients on the package, an attempt was made at the St. Louis convention to bring all interests to an agreement. A committee was appointed to bring resolutions before the convention, upon which all interests in the Association could stand. This committee reported a resolution which seems to have been misunderstood by some of the membership and which the Executive Committee feels should be explained in order to place the Association and the Committee in the right light. The resolution as passed unanimously at the convention last year reads as follows:

The American Feed Manufacturers Association agrees that any form of efficient governmental factory inspection will be welcomed by all honest manufacturers. The Association agrees that no honest feed manufacturer opposes the filing of formulas with State or National Feed Control Officials when required by law. The Association agrees that if, in the judgment of Congress the percentage of an ingredient, or ingredients, in mixed feeds should be stated on the tag or label, then such provision, or provisions, should require the statement by percentage of each and every ingredient in the mixture to the extent of the full 100 per cent, whether or not the feed contains ingredients of so-called low feeding value. Reasonable provision in this event must be made for variation in analyses of constituent ingredients, which variations necessitate slight changes in percentages to maintain the guaranteed chemical analysis.

In the matter of factory inspection, and in the matter of filing formulas, there can be no objections and no misunderstandings of the intent of the resolution. In the matter of naming percentages of ingredients, some of the members, as well as interested people outside of the Association, have misunderstood the resolution. They have understood that this resolution commits the Association to favoring the naming of the percentage of all the ingredients on the package. This is not the case, for the report of the Executive Committee at this same convention clearly states the objections to, and the impracticability of, naming the percentages of ingredients and at the same time maintain a uniform chemical analysis. It also points out the impossibility of enforcement other than by a complete and efficient governmental factory inspection. This inspection, to be effective, would have to cover every manufacturing plant, from the small country feed mill to the large manufacturing plant doing an interstate business. There seemed to be in the atmosphere—and it carried to a good many of the members of the Association—that something of this nature must be put upon the manufacturer, whether he wanted it or not. In fairness to all interests and to all products, in order that all might be treated alike if such a thing became a necessity, the resolution was made to read: "If in the judgment of Congress, the percentages of ingredients should be stated on the tag or label, then the statement of the percentage of each and every ingredient of the mixture should be shown." This resolution was not intended to give the impression, and does not indicate that the American Feed Manufacturers Association favors a law which requires the percentage of any ingredient to be shown on the package. It represents the feeling that if we must show the percentages of any ingredients, then the percentages of all ingredients should be shown. There is nothing to be gained by showing the percentages of part of the ingredients and not all. If a manufacturer claims to be using one of the so-called high grade or high priced materials, it is just as important to the feeder to know how much of that high grade or high-priced ingredient is in the mixture as it is to know how much of the so-called low grade or low priced materials. The only advantage in knowing the percentages of ingredients would be that the feeders might figure a theoretical digestibility of the mixture based on the known digestibility of the various ingredients. It is, however, well understood that such figures would be only theoretical for the reason

that various combinations of ingredients digest differently than other combinations, or than do the individual ingredients when fed alone.

The Haugen Bill

The Executive Committee believes that, while a year ago a number of members seemed to feel that a law requiring percentages of ingredients was pending, that fear is being dissipated because of the more general acceptance of the belief that such information on the bag is of little or no practical value to the feeder and that the difficulties of enforcing such a law would be insurmountable, and also that a uniform chemical analysis is more to be desired than a uniform percentage of un-uniform materials. The abandonment of the best guide we have of the value of a feed, viz.: its chemical analysis, for a meaningless substitute is not to be expected. The manufacturer cannot work on a double standard. Since the adoption of this resolution the Haugen Bill, H. R. 8342, has been introduced into Congress. This Bill embodies the features of naming the weight of each ingredient as well as the ingredients which are of inferior nutritive value. No hearings have been held on this Bill and it dies with the present Congress. Whether it will be reintroduced with the next Congress we, of course, do not know. The Executive Committee feels that the Association should stand firmly upon the resolution of the June 1919 convention, with the understanding that the Association vigorously opposes the naming of the amount of any ingredient. If we can stand as a unit on this platform there should be no need for such a law being passed. The Association should not oppose reasonable national legislation to regulate the feeding stuffs industry. Sane and reasonable regulations have always been good for the industry. They place every manufacturer on an equal competitive basis and the more vigorously misrepresentation and fraud are prosecuted the better it is for the industry and the better it is for every manufacturer.

At last year's convention the Board of Directors directed the Executive Committee to have the secretary's office moved to Chicago from Milwaukee in the belief that the secretary could be of more value to the Association located nearer to the executive heads of the Association. The office was moved to Chicago in September, and we believe the move has been beneficial to the Association. The secretary has been through a very busy year and his time has been well occupied, and his services to the Association have been of a high character.

New Traffic Department

One of the great outstanding features of the year has been the establishing of a Traffic Department, with R. M. Field as salaried traffic manager. The Association has been most fortunate in securing the services of a man of as wide an experience and as broad an acquaintance in traffic circles as is Mr. Field. He has already done much for the membership. In the coming period of railroad readjustments a man of his abilities can be of incalculable value. He is holding regular monthly meetings with traffic representatives of the membership, selected so as to cover every section of the country. Under his management you can be sure that your interests will be well looked after. The establishment of a traffic manager with his supporting Traffic Committee is one of the progressive steps toward a greater American Feed Manufacturers Association. There can be no question but that a united effort on traffic matters through the Association's organized Traffic Committee can do far more good than the individual can accomplish working alone.

Railroad Situation

A matter of the utmost importance to the feeding stuffs industry at this time is the almost impossible railroad situation. Most mills have operated for the past few months only at a small fraction of their capacity. The car shortage which has been bad for years has become so acute that our business is threatened with disaster; in fact, the industry depending upon us—that is, the raising and feeding of live stock and poultry—is also threatened with disaster. Feed famine conditions are already prevailing in many sections. This railroad situation is causing the people of the country to feel the result in reduced milk, meat and egg production and in higher food prices. The high cost of living is due, in a greater measure than is realized, to this inefficiency of the railroads. The present high cost of grain and feed materials is very largely due to the impossibility of moving these products to market in sufficient quantities. Our feed is food; it is food for human beings in an unconverted form. Through the medium of domestic animals and poultry our products become human food in the shape of meat, milk, poultry and eggs. If this productive industry is handicapped for lack of feed products, it means less production and higher prices for these necessities of life. We do not believe that the car situation is going to be much relieved by the present rulings of the Interstate Commerce Commission, and we believe that sooner or later preferential treatment must be given in the matter of car supplies to food and feed industries. Food and feed are in effect one and the same thing, and our traffic manager and our membership must make this clear to the Interstate Commerce Commission and to the railroads. Even in the matter of feed for work animals, in many sections horses and mules are being worked light because they are forced to subsist on pasture. This is also greatly handicapping the making of crops, particularly in the South in the making of cotton. This is not an idle statement; it is a serious actual situation. Unless those manufacturers of horse and mule feeds are given relief not only the production of food products will be reduced but the price of many other commodities will be influenced by this lack of feed for food producing and work animals. Our Association can do no greater service to the country, as well as to its own industry, than to make these points clear to men who have the disposition of cars under their control.

Federal Trade Commission Investigation

During the year, Senator Norris of Nebraska introduced a resolution in the Senate of the United States, which resolution was passed by that body, instructing the Federal Trade Commission to make an investigation of the feeding stuffs industry. For several months the Federal Trade Commission has been engaged in an investigation of the industry. The Association welcomes this investigation; clearly, the feeding stuffs industry has nothing to fear from such an investigation and everything to gain. Full co-operation on the part of the membership with the investigators for the Federal Trade Commission is urged. Those members of the Association who have been seen have, we believe, uniformly given every assistance possible to the investigators, and those who have not as yet been seen are urged to give freely of their time and information, to open their books and records and in every way deal frankly, in order

that this investigation may be thoroughly and expeditiously made. We believe that the nature of our dealings as an association and as individual members has been of the most clean character and that this investigation will serve to bring out the great economic value of the industry in the reclamation, conservation and preparation of feed materials and the service which it is rendering to the feeders and the public at large.

Co-operative Advertising Campaign

During the year a co-operative advertising campaign was started and completed. A fund of approximately \$20,000 was raised for this purpose and through the Breitpraak Advertising Agency a campaign in 15 of the leading farm papers covering as well as possible every section of the country east of the Missouri River, North and South, was carried out, five advertisements appearing at intervals of one month. The secretary's office has received over 3,000 inquiries as the result of this advertising. The inquiries are in the nature of requests for a booklet treating on commercial feeds which it was planned to supply. Material for the booklet has been prepared, but, frankly, it has not pleased those in charge of the work and the booklet has not as yet been issued. The Executive Committee has felt that because of the near approach of this convention, with probably new officers and a new Executive Committee, it was only fair to leave this work for their approval or disapproval. From the amount of interest created by this very meager campaign it is the belief of this Executive Committee that co-operative advertising is a feature which can well be included in the activities of the Association, but to be of value a continuous and well supervised campaign should be conducted.

Little of real benefit to an industry as diversified as ours can be accomplished with a small advertising



GEORGE A. CHAPMAN
Chairman Executive Committee

ing appropriation. The diversified interests must be covered, ranging through the backlot poultry raisers, the hog, beef, cattle and dairy cow feeders, to the horse and mule feeders. An effective campaign will cost much more money than it has been possible so far to raise. The Committee undertook to raise a fund of \$25,000 for this trial campaign, but fell short. It is felt that such work should not be supported by a few but that every member of the Association should contribute, even if but a small amount. The list of contributors to this fund did not amount to more than 33. Such work undoubtedly is valuable, but should not be undertaken in a small way. If every member of this large and prosperous Association would contribute to such a fund, even in a limited way, but in proportion to his output or the benefits he believes he may receive, a very large fund could be raised, and we feel very beneficial results could be obtained. It is neither good for the Association nor fair to the few to have such undertakings supported by a small minority.

An Appeal for Co-operation

This is an Association of, roughly speaking, 200 members. As is the case with all co-operative effort, a certain few must be delegated to do the work and carry out the will of the many. Those delegated to do this work have a great responsibility for they are expected to, and must, not only look after and carry out the will of the majority, but they must look after and safeguard the interests of the minority, regardless of how small that minority may be. In an industry so diversified as that represented by our Association this is no easy task. The work of your officers and Executive Committee is a most difficult one unless it has the complete co-operation and support and confidence of every member of the Association. This, or any other association, should not be for the interests of, or supported by a small part of its membership. Those delegated to work for the Association cannot do good work nor accomplish the greatest good for all unless the membership is back of them 100 per cent. The membership cannot be back of its officers and its Executive Committee 100 per cent unless every member of the Association has a keen and active interest in the work of the Association. The best method of securing this interest and co-operation, as in most undertakings, is through a considerable financial interest. The old policy of guaranteeing the necessary working funds for the support of this organization through passing a sheet for voluntary subscriptions, known as the "Guarantee Fund," has been necessary for the reason that the annual dues did not supply sufficient funds for the conduct of the Association's affairs. The expenses of the Association are constantly increasing;

the movement of the office from Milwaukee to Chicago with its attendant increased activities, the employing of a salaried traffic manager with his expenses, have definitely increased the expenses this year. If the Association is to progress it must necessarily spend more money, because its activities increase with its progress, and progress cannot be secured without more expenditures. The Guarantee Fund has been subscribed to annually by a comparatively small number of members. Last year's Guarantee Fund showed 37 subscribers and amounted to \$9,200. It is felt that the best interest of the Association involves the discontinuance of this Guarantee Fund and an increase in the annual dues sufficient to make up as much or more than this Guarantee Fund. It is not to the credit of the Association, either from within or from without, that a comparatively few members should supply a large portion of its funds.

Every Territory To Be Represented

In planning for a better American Feed Manufacturers Association the best can only come from a greater and wider interest of its membership in its affairs. With that in view the outgoing Executive Committee urges the election of officers and an Executive Committee from widely diversified interests and from widely separated sections of the country. We believe the monthly Executive Committee meetings can be held to better advantage not always in one city but rotating in a circle of cities, so as to create a wider interest in these meetings and in order that these meetings may more truly represent the various sections and the various branches of the industry.

This Association can only truly represent its membership and pull as a unit for the good of all when every member feels he has an equal or at least a proportionate interest financially and in every other way in the conduct of its affairs. We have a good Association, one which has accomplished a great deal of good for the betterment of conditions in the feeding stuffs trade and for the good of its members. Those of us who can look back 13 or 14 years and can see the conditions which prevailed before this Association was formed as compared to present day conditions, and those of us who can see the tremendous development in our industry since this Association was formed, do realize that the Association has been a large factor in these improved conditions and this great development of the industry. We believe we have a right to be prophetic and look into the future and see as great or greater developments and as great improvements in conditions through the efforts of this Association in the future as in the past. If the future is to do for us much as the past it must come through striving for it, and in Association affairs we must be looking and striving and working for better things—for a better Association; our work must be constructive, never destructive. The work of tomorrow must be planned today.

SECRETARY'S REPORT

Secretary L. F. Brown, 52 Jackson Boulevard, Chicago, gave his annual report which was largely devoted to changes in state laws relative to feeding stuffs but covered the activities of the Association for the year:

The fiscal year of this Association closing on May 31 records a new high water-mark in the activities of the Association. The feed industry, like all other large industries, has had many matters of the utmost importance offered for consideration and solution. In fact, it has seemed that this industry has had more than its share of exasperating problems presented. The Executive Committee has held 13 meetings. These meetings have been uniformly well attended by the members of the Committee, in many cases at considerable inconvenience to them as well as no inconsiderable amount of expense, as the Committee members receive no compensation and are not even reimbursed for the expense incurred in attending such meetings.

The year 1920 is what may be termed an off-year in Legislative matters, most states holding sessions every second year and this is the year when but few regular sessions are held. However, some legislation of considerable importance has been presented. The State of New York enacted a law which embodies a new principle in feed inspection. The law makes two classifications of materials used in the composition of mixed feeds; one class called "concentrates," the other class called "roughages." The law provides that when any material classed as a "concentrate" is present in a mixed feed in amounts of less than 5 per cent the percentage of such material shall appear on label. It further provides that when any mixed feed containing as an ingredient one or more of the materials classed as a "roughage," the percentage of total roughage shall be declared when the total fibre content exceeds 10 per centum with an allowance of 20 per centum of fibre content for variation. It further provides that in the case of molasses, the minimum per centum of sugar shall be guaranteed. It further provides that the required information shall appear on a tag attached to package, except when the container is of white or light colored paper or cloth sacks, in which event the tag may be omitted, but the statement shall be plainly and conspicuously printed upon each sack. The law further provides that a licensee may change any ingredient in a licensed feeding stuff under the license issued, by filing with the Commissioner of Agriculture a duly written notice or statement of such change, provided that such change does not change the percentages of protein, fat or fibre guaranteed under such license, and that the statement on the sacks or tags shall be changed accordingly. The law also provides for factory inspection of plants located outside the State of New York and authorizes the commissioner to cancel a license or refuse registration in the event that access to the plant where the feed is manufactured, for purpose of inspection, is refused. The law further provides that a retailer having feeding stuffs in his possession for sale which he purchased during the time when the license was in force shall not be prohibited from selling the remainder of such goods on hand by virtue of the revocation of the license or by the fact that the year for which the license was issued has expired. The act takes effect January 1, 1921. How this principle will work out in actual practice remains to be seen. It is a compromise measure and not nearly as drastic in its requirements as the Bill originally prepared.

The State of Mississippi amended its feed inspection law by providing for a registration fee of \$2 on each brand of feed offered for registration. This is in addition to the regular inspection tax of 20 cents per ton and becomes effective October 1, 1920. This state has adopted a new regulation providing against registration of the same brand name by more than one applicant.

South Carolina amended its law by providing that

in addition to the analysis now required by law on all mixed feeds sold within the state, or rules of the Commissioner of Agriculture, Commerce and Industries, there shall be included in such analysis a showing in full of each ingredient contained therein, and becomes effective July 1, 1920. In commenting on this amendment, Commissioner Harris says "the amendment requiring a showing in full of each ingredient contained therein is superfluous, in that Sec. 2420 of the Civil Code contains this requirement expressed in different words." Therefore, I am unable to state wherein this amendment will require any change in branding.

The State of Maryland enacted a new feed inspection law which is substantially the Uniform Feed Law recommended by the Association of Feed Control Officials. The law takes effect July 1 but provides for annual registration by calendar years. Mr. McDonnell, state chemist, advises that in the case of registrations expiring July 1, the charge will be \$10 for the short registration until January 1 and after that the annual fee of \$20 for each brand will be collected.

The State of Virginia had an amendment, prohibiting the use of wire or metal fasteners in attaching tags to bags. This amendment failed of passage.

I have ordered and will shortly send to each of our members copies of the complete Maryland and New York law.

There is now pending in the House of Commons of Canada a bill to regulate the sale and inspection of commercial feeding stuffs. The branding requirements are as follows:

- (a) The name, brand or trade-mark of the contents.
- (b) The full name and address of the manufacturer.
- (c) The specific name of every ingredient contained in the feed.
- (d) The registered number.
- (e) The analysis as guaranteed by the manufacturer, which shall show the percentage content of protein, fat and fibre.

Authority is granted to the administrative officer, the Minister of Agriculture, to make regulations, prescribing the maximum amount of whole or ground weed or other seeds and other materials which may be allowed in any grain or other ingredients used for the manufacture of feeding stuffs, without affecting the right to describe it as clean within the meaning of this Act; to make regulations establishing a standard of quality and contents for, and fixing the limits of variability permissible in, any feeding stuff or ingredient or constituent thereof; to designate the kind of damaged grain, seeds or other material which shall be considered as injurious to the health of livestock or poultry within the meaning of this Act; to make regulations prescribing the size, color and character of the tags or labels to be used for the purposes of this Act, and the size and kind of printing to be used for the purposes of this Act, and the size and kind of printing to be used for any particulars required to be printed on such tags or labels; to make regulations prescribing how samples of feeding stuffs are to be taken and analyzed; to make regulations for any other purpose deemed by him to be necessary for the carrying out of the provisions of this Act.

The bill provides for a registration fee of \$2 for each brand, and the penalty for violation for a first offense to a fine not exceeding \$100; and for the second offense to a fine of not less than \$100 and not exceeding \$200; and for each subsequent offense to a fine of not less than \$200 and not exceeding \$500, together with the costs of prosecution; and in default of immediate payment of such fine and costs shall be liable to imprisonment for a term not exceeding 12 months unless such fine and costs of enforcing the same are sooner paid, and the feeding stuff shall be liable to forfeiture to His Majesty.

The wisdom of the Executive Committee at our last meeting in changing the secretary's office from Milwaukee to Chicago has been demonstrated many times during the past year and has resulted in much better team work and quicker action than was possible under former conditions.

In pursuance with the provision of a resolution adopted by the Executive Committee at its February 17 meeting, authorizing the retaining of a traffic manager to look after the traffic affairs of the Association, Ralph M. Field of Peoria has been secured for this position and has been devoting a portion of his time to the services of the Association in such capacity. The necessity of such a position was seemingly imperative, and many matters of grave importance to the membership of the Association have been presented for consideration and solution.

On July 29, 1919, Senator Norris of Nebraska offered a resolution in the Senate of the United States, reading as follows:

"Resolved, That the Federal Trade Commission be, and he is hereby, authorized to make an investigation of the manufacture and sale of commercial feeds for animals; such investigation to include the gathering of statistics as to the supply of the various commodities which are used for animal feeds, together with the fluctuation in the prices of these commodities, the extent to which these commodities are converted into concentrated food by manufacturers; what combinations or understandings, if any, exist between the feed manufacturers and wholesale feed dealers and retail feed dealers; and what fraud, if any, is practiced by dealers in the way of misbranding or using inferior substitutes in mixed feeds.

"Resolved further, That the Secretary of Agriculture be, and he is hereby, directed to co-operate with the Federal Trade Commission in this investigation."

This resolution was subsequently adopted and at the meeting of the Executive Committee on August 5, 1919, the secretary was instructed to communicate with the chairman of the Federal Trade Commission, tendering the services of the Association to the Commission in its investigation. The secretary has endeavored to co-operate with the Federal Trade Commission to the fullest extent in this matter and has placed the records, correspondence, reports of annual meetings, and, in fact, everything in the office of the secretary at the disposal of the investigators. At the October meeting of the Executive Committee it was decided to conduct a co-operative advertising campaign and that contributions from our membership for this purpose should be solicited. Copies of each advertisement have been furnished our membership together with a list of the publications in which they appeared.

There have been two bills pending in Congress which are of considerable importance to the feed industry. The so-called Haugen Bill was introduced August 8, 1919. It provides that the following information shall appear upon each package of feed entering into interstate commerce:

- (1) The name, brand, or trade mark under which sold.
- (2) The kind and weight of each ingredient design-

nated by the name by which it is commonly known in the English language.

- (3) The net weight.
- (4) The chemical analysis, stated in such form as the Secretary of Agriculture shall determine.

(5) The ingredients which are of inferior nutritive value as ascertained and promulgated by the Secretary of Agriculture.

- (6) The name of any substance used to artificially color, coat, or stain any ingredient.

(7) The name and address of the manufacturer, if the commercial feed is prepared in the United States or its possessions, or of the importer, if it is imported.

A pure advertising provision is embodied in the bill, also a standard package provision. The above are but a few of the many provisions carried in the bill. Other matters before Congress, seemingly of greater importance, has resulted in no attempt being made to press this bill for passage. It, however, probably will be considered at the next session of Congress.

The so-called Vestal Bill is an act to establish the standard of weights and packages for wheat-mill and corn-mill products, namely, flours, hominy, grits, and meals, and all commercial feeding stuffs and for other purposes. The standard package for feeding stuffs as provided in the bill when the same are packed, shipped, sold or offered for sale in packages of five pounds or over, shall be those containing net avoirdupois weight 100 pounds, or a multiple of 100 pounds, or one of the following fractions thereof: Five, 10,



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25, 50, 60, 70 and 80 pounds. This bill passed the House of Representatives on December 8, but failed of passage in the Senate, and is likely to be considered later.

Our Association retains its membership in the Chamber of Commerce of the United States of America. Ex-President Genung continues to represent us in the capacity of national councilor, with R. P. Walden as substitute national councilor. Your Executive Committee voted a contribution of \$300 to the building fund of that Association, this amount being five times the amount of the annual dues of that Association and the amount solicited by that organization for such purpose. As heretofore, the Executive Committee has recorded the vote of the Association on each referendum submitted during the year by that organization, with one exception.

During the year, our card index of brand names has been revised, and, at the present time, I believe to be fairly complete. The list at present contains over 6,000 names and our membership have frequently consulted this list in their endeavors to select new trade names.

The secretary's office has constantly on hand a supply of the electrotypes of our official emblem for distribution to our membership for use on stationery or advertising matter.

The publicity work which our Association carried on for a couple of years under the direction of Bert Ball was discontinued on July 1 last.

At our last annual meeting I reported a membership of 177; 167 active members and 10 associate members. During the year eight active members have withdrawn or been suspended for non-payment of dues. Twenty-five new active members and three new associate members have joined the Association; the membership at the close of this fiscal year being 184 active and 13 associate members, total, 197, a net increase during the year of 20.

In closing, it is again my privilege and pleasure to thank each member of the Association for the uniformly courteous treatment which has been accorded during the entire fiscal year just closed.

The morning session closed with the report of Treasurer W. R. Anderson.

THURSDAY AFTERNOON SESSION

The afternoon session opened with an informal talk by Ralph M. Field, who for the past four months has been acting as traffic manager for the Association. He told something of the complexities of the railroad situation at the present time and stated that a great improvement in railroad service cannot be looked for within the coming year.

In regard to the proposed raise in rates, Mr. Field stated that the Industrial Traffic League believed an increase was justified. They need \$6,000,000,000 in the next three years for replacement and improvement besides \$1,000,000,000 a year for current expenses. The present lack of service is far more costly to business than the increase would be.

He told of the trouble which arose when the Commission issued its order last fall increasing the minimum weights and of the continuation of those weights in March. The recent order, growing out of the hearing held in St. Louis on May 10, was explained by Mr. Field. This order will be found on another page of this issue.

Mr. Field recounted some of the things which the Traffic Committee and he had already accomplished. A proposed increase on by-products from 1½ to 6 cents was cancelled; the proposed increase on blackstrap was postponed until next February.

Mr. Field stated his desire for a wider representation on the Traffic Committee so that every territory represented by the Association could present its peculiar problems at the monthly meetings.

THE CHEMIST AND FEEDING PROBLEMS

Dr. E. V. McCollum of the Department of Chemical Hygiene of the Johns Hopkins University, had for his subject: "How the Chemist and the Feed Manufacturer Can Help the Farmer with his Feeding Problems." He spoke informally and in general terms, beginning by making the statement that it is a well established fact that we must look at a ration differently than we used to do.

Beginning in 1863 in Germany, physiological chemists have prepared ration tables from time to time, but modern research shows that knowing the chemical constituents of a feed is not enough. The quality of proteins varies according to the sources from which it is derived. It is also true that digestibility depends largely on the combination; thus two proteins each poor when fed alone, might be very good when combined together each having qualities that the other lacked.

Feed manufacturers, he said, could cooperate with farmers by educating them so that they could interpret the labels on feed, and then the manufacturers themselves should be educated to provide the proper ingredients. The time has not come when the quality of proteins can be stated on the label, but the source of the protein should be stated so that the buyer can judge for himself as to its quality.

Mr. McCollum made an appeal for the support of the National Research Council and urged that feeding experiments be conducted through that body.

Dr. H. P. Armsby of State College, Pa., directed his talk along lines similar to those of the previous speaker and dwelt at length on the benefit the feed manufacturers could derive from the National Research Council.

CHEMISTRY AND FEED MANUFACTURERS

Dr. Andrew J. Patten of East Lansing, Mich., president of the Association of Feed Control Officials of the United States, read an interesting paper which followed the thought of the previous discussion. The address was in part as follows:

Great changes have occurred during the past half-century or more. In the first place, the modern type of animal is very unlike that of previous times. The ideal dairy cow of today is a highly developed milk machine, extremely sensitive to her surroundings and requiring a degree of care in management and feeding, if she is to produce maximum results, which was unnecessary with the coarser and less delicate organisms of the past. To be successful a dairyman must provide suitable winter quarters for his herd and supply rations that will allow for continuous and generous production throughout the entire season. This must be accomplished by the use of a greater variety of feeds than formerly were available. While the number of useful forage crops have greatly increased, the farmer is no longer able to raise all the feed which his animals consume. Numerous kinds of commercial feeds are now purchased which vary greatly in their nutritive value. Many of these purchased materials are by-products from the manufacture of starch, syrup, oils and preparations for human consumption. In addition to these changes, animal husbandry is required to supply an ever-increasing non-producing class with products that are required to meet higher and higher standards of quality as measured by flavor and texture. Some of these qualities, at least, are influenced by feeding. All of which points to the fact that the conditions and problems facing this branch of industry are growing more and more complex.

Just as science has influenced every department of human activity, so, too, it has laid her hands upon the business of the farmer and has compelled him to adopt a new line of thought and practice. An understanding of the fundamental facts and principles, as they relate to a great variety of problems, is essential in order that the farmer may meet the increasing competition occasioned by this influx of knowledge.

Many difficult problems are involved in the feeding of animals. These have their origin in the production of forage and grain crops, where it is necessary to discover what ones yield the largest food value per unit of expenditure. These must be so combined that there will be no waste of material or energy, and in the purchase of commercial feeds a decision must be reached as to what to buy when the variety is large and the range of prices wide. Furthermore, the influence of the feed upon the quality of the product must be taken into consideration. The wise solution of these problems, which are continually facing the industry, demand something more than practical experience.

In the solution of these problems chemistry has played an important part, and it is my purpose to

review, briefly, the manner in which the science of chemistry has been instrumental in advancing human endeavor from the "appropriate" to the "creative period" as it relates to animal industry.

A knowledge of the materials out of which vegetable and animal tissues are constructed is fundamentally necessary to a broad understanding of the economy of cattle feeding. Although there are now known to be about 90 distinct chemical elements, it is remarkable that only about one-sixth of them are intimately related to plant growth, and still less occupy a prominent place in animal nutrition.

These 15 elementary substances are carbon, hydrogen, oxygen, nitrogen, calcium, magnesium, sodium, potassium, silicon, phosphorus, iron, sulphur, chlorine, iodine and manganese. Some of them are of minor importance, but in the elaboration of plant tissues these elements are made use of by the plant in building very complex substances, which the chemist has classified under the following heads: Protein, fat, starch, sugar, cellulose, ash, etc.

It is not sufficient that we know the kinds and amounts of the food nutrients in the various food stuffs, but we must know the digestibility and the value of these nutrients for maintenance and production. We must know the requirements of the various farm animals at different stages of growth and under different rates of production. Here, again, chemistry came to the aid of the industry, and the extensive researches of such men as Leibig, Davy, Lowes and Gilbert, Kellner, and Wolff in Europe, and Armsby, Atwater, Jordan, Haecker and many others in this country have given us elaborate and carefully worked out feeding standards.

All of these standards are based on the assumption that all digestible protein is of equal value regardless of its source or composition, and the balanced ration properly proportioned to meet the demands of an animal under a given condition was for a long time considered to be supreme.

With the advances in our knowledge of organic chemistry it became possible to isolate individual proteins from the various feeding stuffs and to study their composition. A great deal of work has already been accomplished along this line, and it has been further shown that when these proteins are subjected to hydrolysis or digestion, compounds of less complex nature, known as amino acids, are obtained. These amino acids are now known to be unlike in composition, chemical characteristics, as well as in their ability to support growth.

This knowledge of the composition of the various proteins caused some experimenters to look with suspicion upon the balanced ration, especially when the ration is derived from a limited variety of feeds. In this connection the now well-known experiment conducted at the Wisconsin experiment station is interesting. In these trials four lots of heifers were fed to maturity on rations from a single plant source, which furnished the full amounts of nutrients and net energy called for by the standards. One lot was fed on a ration derived wholly from the corn plant; another on a ration derived wholly from the wheat plant; a third, a similar ration from the oat plant; and a fourth, a ration composed of a combination of the three. Many of you are familiar with the results obtained, and it is only necessary to here record that the ration derived from the wheat plant was markedly deficient during the period of reproduction. The ration consisting of a combination of the products of the three plants was also found to be inferior to the corn ration alone. Since then many of the pure proteins have been isolated and used in feeding experiments. Some of these have been found to be unable to support growth, while others fulfill all the requirements of the animal for growth and reproduction. During the past few years great advances have been made in our knowledge of nutrition through the work of Hutchinson in England and McCollum, Hart and Mendel in this country. They have discovered that some foods lack certain indefinite substances that are vitally necessary for normal growth. These substances are, as yet, only recognized by their effect upon the growth of the animal and are known by the general term "Vitamines." How this newer knowledge will affect the general practice of feeding must be left to the future.

All this has been accomplished through the aid of chemistry, and, just as chemistry has made marvelous contributions to technology and wealth in other lines of industry, so, too, has it played a large part in the development of the business with which you men are engaged. No feed manufacturer could long exist in business today without the aid of a chemist; in fact, a large part of the materials you purchase are subject to chemical analysis, and the finished product as it goes from your plants must be sold on a guaranteed chemical analysis.

Many of the larger manufacturers maintain their own chemical laboratories, and some of them also maintain experimental farms, where the feeds, after being mixed, are fed to experimental animals. This is a good beginning, but why not go still farther and establish research laboratories where the more obscure problems relating to animal feeding can be scientifically studied. The feeding experiments of the past have given much useful and valuable information, but they will not suffice for the future. The importance of the subject is such as to demand the services of highly trained men, not mere analysts, but scientists in the broad sense.

President Abbott at this time appointed the following committees: Nominating: J. Read of St. Louis, Mo.; W. R. Smith-Vaniz of Memphis, Tenn.; G. E. Hillier of Cedar Rapids, Iowa; A. C. Palmer of Waverly, N. Y.; F. M. Wilson of Lamar, Colo.; H. Wehmann of Minneapolis, Minn.; and A. D. MacLellan of Owensboro, Ky.

Auditing: J. W. Badenoch of Chicago and C. C. Dodge of Waukegan, Ill.

Resolutions: F. A. McLellan of Buffalo, N. Y.; J. W. Anderson of Kansas City, Mo.; and W. J. Thompson of Cincinnati, Ohio.

THE HORSE AND HIS PLACE

Wayne Dinsmore, secretary of the Horse Association of America, gave an interesting talk on the importance of the horse to the feed manufacturer and to the country. He stated that there were over 3,000,000 horses employed in cities and that they consumed 15 pounds of grain and 20 pounds of hay each per day, a total of 10,900,000 tons of hay and 8,000,000 tons of grain per year for the town horses.

He told of the work the Horse Association was doing in educating the public as to the wasteful-

ness of indiscriminating use of motor vehicles when for most purposes the horse would serve better and cheaper.

FRIDAY SESSION

The first address on Friday morning was by Dr. E. F. Ferrin of Manhattan, Kan. He spoke on "Neglected Factors in Swine Feeding."

NEGLECTED FEEDING FACTORS

Great differences exist in the ability of producers to raise swine successfully. Some men with apparently strenuous efforts are unable to get satisfactory results. Neglect of some necessary points will usually be found at the bottom of the difficulties and it is for this reason that I wish to present the subject, "Neglected Factors in Swine Feeding."

Sanitation is a very comprehensive word and is the key to the avoidance of many troublesome swine ailments. Let us specify what the term means as it applies to hog production. First of all, the location of buildings and lots should be well drained. If possible select a south slope exposed to the sun which will dry off the ground following rains, minimizing the formation of mud holes. By all means, feed grain upon a cement floor instead of upon the ground. The saving of grain is sufficient in a short time to pay for the floor and the sanitary problem is much simplified. Worms inhabiting the intestines are one of the most serious pests in small pigs and their occurrence is lessened by feeding where the grain will not be contaminated.

Sanitation in the houses necessitates regular cleaning, not only of floors, but of walls and projections which collect dust. Dust irritates the lungs and nasal passages, making the entry of parasites more probable. A floor which can be thoroughly cleaned



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is the only satisfactory one. There are several types which are good. Cement makes a good surface, but some insulation should be provided, else the floor will be damp and cold. Surfaces of creosoted wood blocks and of cork bricks have proved very desirable in a house recently built at the Kansas Station.

External parasites, such as lice and mange, are difficult to control unless the buildings are kept clean. The United States Department of Agriculture has shown that it takes approximately one-fourth more grain to make one hundred pounds gain upon lousy hogs than upon similar swine free from such parasites. Crude oil is the standard treatment for lice, but we have recently been using refuse oil from automobile crank cases for this purpose. It kills the lice as well, but must be applied more frequently than crude oil.

Since the mineral needs of animals are to be discussed at this meeting, I wish to say merely that swine, of all animals, are most apt to be fed rations deficient in minerals. This means that more than ordinary attention should be given to the supply of ash in swine rations.

Too little protein is given in average rations in spite of the emphasis balanced rations have received for years. Protein feeds are costly and it is human nature to use them sparingly. Nor is it a question of quantity alone, but also a matter of the quality of the proteins fed. We have done some work the past two years at the Kansas Station which shows that corn and tankage do not make an adequate ration for growing pigs. Apparently there is a shortage of some of the essential amino acids which keeps the pigs from developing normally.

There are approximately 13 amino acids. These are simple soluble forms of protein; the compounds which are absorbed from the intestinal tract and from which body proteins are built. Corn, the common grain fed swine, is deficient in at least two important amino acids in a marked degree. We must combine with corn the feeds which carry the amino acids so lacking in the grain itself.

What can we furnish swine to supply the amino acids which corn lacks? Green feeds, if possible. The legume crops, alfalfa, clover, soy beans, cow peas are excellent. Rape, a non-legume, is splendid. But, during that part of the year when green crops are unavailable, what is to be used? Milk by-products are excellent. Commercial milk feeds are being produced in rapidly increasing amounts. Skim milk and buttermilk powders, the semi-solid milk feeds and other forms are all most satisfactory. Especially are these milk feeds valuable for small growing pigs. For older hogs, alfalfa meal or hay is excellent, but its fiber content is too high for the best satisfaction with young stock.

Kaffir corn was fed in the same experiment and proved nearly as unsatisfactory combined with tankage as was maize. But the difficulty in this case was not so much a protein deficiency as a vitamin shortage. Butter fat added to kaffir and tankage corrected the diet and gave immediate results.

Let us say a word about these vitamins. They are intangible; cannot be isolated and their existence is known only by the results secured as Dr. McCullum mentioned from biological analysis. One of them, termed fat soluble vitamin, is found in the leafy portion of plants, and especially in butter fat, but in the case of most grains and seeds the fat

soluble vitamin is decidedly lacking. Another water soluble vitamin is present in at least reasonable amounts in all common feed stuffs grown upon farms.

What effects do animals suffer when these vitamins are short in amount? The common result is a condition most easily described as "runty." Deficient growth, rough coats of hair, and if a serious shortage exists some one of the so-called "deficiency diseases." Aggravated cases result in death, but wonderful recoveries are made when the proper material is introduced in the diet.

Here is an excellent place for alfalfa. The leaves are particularly valuable; stems much less so. For the ruminants and the horse, alfalfa can be liberally used, but swine unfortunately are handicapped by their small digestive tract and can consume only limited amounts.

There are three possibilities opened up by this work. First, the lack of proteins from a quantity standpoint. This will retard growth and delay development. Second, the shortage of certain ones of the essential proteins known as amino acids. This we term a deficiency in the quality of proteins given. The condition may exist when the feeder thinks he is giving an abundance of protein, since some of both the plant and animal proteins are decidedly unbalanced in their amino acid make up. A lack of some one or two amino acids may be even more serious from the growth standpoint than a slight quantity shortage of protein.

The third shortcoming may be that of vitamins. Even in common rations such as corn and tankage this may be a limiting factor.

How is the feeder to avoid these stumbling blocks? Even though well informed, he cannot calculate whether or not his rations are deficient in these particulars. His balanced ration may be far from adequate even though he figure it most carefully.

The safeguard is the use of a variety of feeds. If the ration is made up of feeds from several sources the chances of these shortages existing are slight. It is a good recommendation to advise the use of several feeds in making up a ration.

FEEDING PROBLEMS

Dr. G. F. Heuser, assistant professor of Poultry Nutrition of the New York State Agricultural College, gave an exceedingly practical talk on "Feeding Poultry for Economical Production."

He said that, as the hen has practically no large intestine, she cannot break down fiber, and feed should be light in fiber on this account. The digestion tract is short and therefore the feed should be concentrated.

In the first year's production the hen requires less feed per dozen eggs than in any subsequent year in the proportion of 6 pounds for first year, 8 pounds for second and 12 pounds for third. The feed also affects the color and salability of the eggs. Yellow corn, kale and sprouted oats make an egg with a dark yolk. Milk feeds and white corn make a light yolk. Cotton seed meal makes spots on the yolk which affects the value of the egg. Onions, fish meal and cabbage affect the flavor.

In discussing the relative values of whole grain and meat, Dr. Heuser said that the hen can assimilate more food than the gizzard can grind, so that the best feed is equal parts of grain and mash. Milk, meat scraps, green cut bone and tankage are valuable additions to the ration. The hen must have phosphorous and calcium, preferably in the shape of oyster shells.

MINERAL FEEDS

Dr. E. B. Forbes of Wooster, Ohio, delivered an address on "Mineral Feeds for Farm Animals." This address dealt with the importance of minerals in building up the bone structure of the animal and also its relation to the reproductive function. Deodorized steamed bone with a salt mixture was recommended.

SATURDAY SESSION

On Saturday morning an executive session was held. The officers elected are as follows: President, R. W. Chapin, Chapin & Co., Chicago, Ill.; first vice-president, C. A. Krause, Chas. A. Krause Milling Company, Milwaukee, Wis.; second vice-president, O. F. M. Keller, Arcady Farms Milling Company, Chicago, Ill.; third vice-president, F. M. Wilson, Denver Alfalfa Milling & Products Company, Lamar, Colo.; treasurer, W. R. Anderson, Milwaukee, Wis.

Board of Directors: H. A. Abbott, chairman, Continental Seed Company, Chicago, Ill.; C. U. Snyder, vice-chairman, C. U. Snyder & Co., Chicago, Ill.; J. W. Anderson, Kornalfalfa Feed Milling Company, Kansas City, Mo.; W. O. Greene, The Corno Mills Company, St. Louis, Mo.; Dwight Hamlin, Pittsburgh, Pa.; G. E. Hillier, Penick & Ford, Ltd., Cedar Rapids, Iowa; O. E. M. Keller, Arcady Farms Milling Company, Chicago, Ill.; F. S. Lodge, Armour Fertilizer Works, Chicago, Ill.; F. J. Ludwig, Chas. M. Cox Company, Boston, Mass.; A. D. MacLellan, The Sugarine Company, Owensboro, Ky.; A. C. Palmer, Tioga Mill & Elevator Company, Waverly, N. Y.; P. R. Park, The Park & Pollard Company, Boston, Mass.; C. A. Trent, Pueblo Alfalfa Milling Company, Pueblo, Colo.; R. P. Walden, Corn Products Refining Company, New York City, N. Y.; H. Wehmann, International Sugar Feed Company, Minneapolis, Minn.

The Board of Directors elected the following to act as the Executive Committee: F. A. McLellan, chairman, The H-O Company, Buffalo, N. Y.; H. G. Atwood, American Milling Company, Peoria, Ill.; G. A. Chapman, The Quaker Oats Company, Chicago, Ill.; Ralph M. Peters, M. C. Peters Mill Company, Omaha, Neb.; A. F. Seay, Ralston Purina Company, St. Louis, Mo.; W. R. Smith-Vaniz, Royal Feed & Milling Company, Memphis, Tenn.

MID-SUMMER MEETING OF INDIANA
GRAIN DEALERS

The Library Room of the Indianapolis Board of Trade was overflowing with grain dealers when president H. W. Reimann of Shelbyville, called the mid-summer meeting of the Indiana Grain Dealers Association to order, June 29, at 10 o'clock. He stated that it was not customary for the president to make an extended address at the summer meeting. All were interested in the coming wheat crop and the program was arranged to enlighten dealers as much as possible on the new crop. He then introduced Russell G. East, County Agricultural Agent, Shelbyville, Ind., who made an interesting talk on "Experience in and Method for Treatment of Seed Wheat by the Hot Water Process to Prevent Spread of Smut." This address will be found in the department of this issue devoted to "Field Seeds."

Mr. East was asked to tell something about testing seed corn in Shelby County. He explained the Modified Rag Doll method and recommended it as the best in use. This method is given in full in Bulletin No. 236 of February, 1920, published by Purdue University Agricultural Experiment Station, La Fayette, Ind.

The chair then appointed the following committee on Resolutions: Charles Northlane, Union City; W. E. Harding, Ellwood; Bennett Taylor, La Fayette; D. C. Moore, Waynetown, Charles Ashpaugh, Frankfort.

CORRECT VARIETIES OF WHEAT

W. A. Ostrander, associate in soils and crops, Purdue Agricultural Extension Department, gave an address on the "Importance of Planting Correct Varieties of Wheat and Methods of Securing Seed," in part as follows:

The most logical thing that could exist would be the fine co-operation that is being shown between the grain dealers and millers with the state institutions in their extension work in bringing about a more satisfactory condition in the wheat production in Indiana. As we are growing right close to two million acres of wheat in this state, it is further evidence that this crop should be given serious consideration by all concerned that every acre may yield its maximum amount of flour for the public. With our land in a somewhat less responsive condition than before the war, it behooves us that steps should be taken to replace this unresponsiveness with the best kind of seed that will yield the largest amount of good flour possible. Planting poor seed of not the highest producing ability on good, well fertilized soil is just as unbusinesslike for the farmer as to feed good feed to scrub stock.

As the great majority of wheat must find its end in the flour barrel, so then one of the important final tests on wheat should be that it make a large percentage of good flour. And I cannot see why a variety of wheat should be grown in Indiana that does not measure up to this standard. Of course, a wheat must also have good yielding ability to be profitable to the farmer. In corn, if we get a soft crop we can feed it to our hogs and market it and make it available for human consumption in that way. But when we have a wheat like Red Wave that has low quality and a variable yielding ability, it resolves itself into an unprofitable per acre yield of flour to the public and farmer because it cannot measure up to the good standards.

The Farmer Must Co-operate

We are trying to get farmers to understand that as they are particular in the flour they use, so should they be careful in the wheat that they sell, and if a man doesn't want rye flour in the flour that he buys, so should he be careful in keeping rye out of his fields. Probably taking the state as a whole we lose many acres each year on having an average of more than 1 per cent in our wheat, some running as high as 10 to 15, which at the elevator gets mixed up with wheat of less mixture, and so cuts down the grade that you men have at the terminal market, and, of course, we must bring this back to the farmer. A mixture of two wheats that mill differently is just as bad from the miller's standpoint, and consequently will cut the grade that you get, and it is only right that this is passed back to the farmer who is at fault.

One of the steps that we are undertaking this year is the standardizing of varieties in a neighborhood, especially in a community that is tributary to one selling point, so that you men may receive only grain of one quality at your elevator, and consequently can ship a higher grade product.

It is only logical to reason that before we can standardize on varieties, we must have available for the farmer who wishes it, wheat of that variety that is of good quality. So a standard was set and the rules and regulations drawn up whereby any man in Indiana could have his grain certified for seed by the Indiana Corn Growers Association co-operating with the Extension Department of Purdue University, if he would make application for it and pay the required fee. The expense of this work has been set as near cost as it was possible to figure it out.

Requirements for Seed Certification

Requirements for a field to pass certification are: First, that it have no rye in it, no cockle, no cheat or onion. Second, that it have not more than 1 per cent of mixture of varieties, regardless of whether they are the same milling quality or not. In other words a bearded variety must have not more than 1 per cent of smooth, and if it is a bearded red chaff it must have not more than 1 per cent of white chaff. That there be not more than 1 per cent of loose smut, a condition that can be controlled as has just been outlined to you by Mr. East. Also that there must not be more than one-tenth per cent of stinking smut. No man is justified in having stinking smut in his wheat, as it can be controlled so easily by the formaldehyde treatment. Further, the wheat must be of good quality and not have an excess of scab or be inferior in other respects.

After the field has been inspected, the farmer is required to send in to the central office a sample of near three quarts of the threshed grain after it is cleaned up through his own fanning mill as he

would plant it for seed himself. This sample is inspected, and if up to quality, the final certification is made. This sample is kept on file for two reasons: First, if the man gets careless and sells seed wheat that he has not cleaned and is not of the same quality that he represents in his sample, the purchaser has a recourse for a refund. This protects the purchaser. On the other hand, if the man gets seed wheat and is one of the perpetual kickers like we find occasionally, when he finds fault to the grower, the grower protects himself by telling him to send in a sample to the state office, and if it is the same as we received, then we, in turn, back up the grower and advise the man that purchased the seed that he has everything that he bought.

The fee charged for this work is \$8 for 20 acres or less and 25 cents for each additional acre. It is proposed that the selling price of this seed wheat be approximately \$1 more than the market price. This would vary, of course, in carload lots as compared to three or four-bushel lots, because when the farmer goes to the trouble of cleaning it up himself, pulling out rye, cockle, cheat and onion, and being careful as to mixture, probably having a seed plot to insure it, he is entitled to a reasonable compensation for this work, and any farmer wishing good seed should be willing to pay at least a dollar above the market price for this quality product.

I am sure that when more farmers understand the grain grading rules and requirements now set down by the Bureau of Markets, Department of Agriculture, under which all grain is sold, either from the farmer, from you men, or at the terminal markets, they will make efforts to come under these grades. And one of the places where you men can help very materially, in fact, it will depend a good deal upon how you men handle the situation whether we have rapid or slow growth in the standardization of varieties, is the fact that you pay the full price for good wheat and not more than the actual market price for poor



PRESIDENT H. W. REIMANN

wheat. A great many country dealers, I know, find it more convenient to pay a straight price for all grain coming in, which has to be lower than the best grain is worth and more than the poor grain. This many times saves you a good many arguments, but it is not fair for the man who produces good stuff, and there is no reason why you should encourage a man who produces poor stuff to keep on doing so. Farmers know now that there is one grade and that their wheat must grade that in the wagon as well as in the car, and they should not expect to sell something that they do not have. If a man's wheat grades No. 4, pay him the price for No. 4, and if it grades No. 1 or better, you can possibly afford to pay a premium for it.

PATERNALISM AND ITS DANGERS

Fred G. Horner, president of the Illinois Grain Dealers Association, Lawrenceville, Ill., read a paper on the subject of "Anti-Paternalism and its Relation to the Co-operative Movements." We publish it in part, as follows:

Some of you may not think that what I will say is quite pertinent at this time and place, and you may, perhaps, be impressed by the admitted fact that I am obsessed with one idea, and that is the tendency of our times towards paternalism—towards Governmental control of the avenues and machinery of trade, but I believe that a little thought will convince you that this subject is not only pertinent to trade discussion, but that it is even quite technical.

In my opinion, it is the most important basic question confronting our country, and its correction by the simplification of Governmental machinery; by the elimination of those useless bureaus and commissions and investigating bodies; by the limitation of Governmental authority to strictly Governmental and constitutional affairs, would, more than any other one thing, correct the distress under which this country is laboring today. There is no consideration of our business life so vital and fundamental as the unhampered operation of the law of supply and demand.

Have We Become a Nation of Incompetents?

Catering to the natural sloth and cupidity of their readers, we find the daily press and popular-priced magazines overloaded with articles by a lot of fatuous feature writers demanding that our Government curtail and punish the so-called profiteers. Have we become a nation of incompetents? Have we lost that Yankee shrewdness, which for generations has been a byword in the trade channels of the world? We, who would resist with every atom of our strength the appointment of a personal conservator, are falling head over heels in our mad scramble to secure

the appointment of general conservators in the form of investigating and administrative bureaus. We are insisting that the Government interfere here in the price of shoes and there in the price or distribution of sugar. I will admit that the world's war has thrown the machinery of trade temporarily out of gear; yet at the risk of defying public opinion, I want to say that even profiteering, when unaccompanied by monopolistic features, is not a proper subject for Governmental action, but on the contrary, I make the assertion, without any qualification whatever, that the greatest single cause of profiteering, today, is bureaucracy, and the quickest and the only permanent relief will come, not from the extension, but from the abolition of this paternalism and a return to the free operation of the law of supply and demand; from a cessation of these investigations; from a relinquishment of this actual and threatened control. To get down to fundamentals, which we must do, profiteering is a result and not a cause. Give assurance to the honest and intelligent business man that his business may be conducted in an honest and intelligent manner and there will soon be enough such men in every line to drive out of existence the dishonest and inefficient class. We hear that the law of supply and demand has broken down. The law of supply and demand has not broken down. It has been crucified by Governmental interference. But, it is said, if the law of supply and demand has not broken down, our transportation system has, which, by preventing a proper distribution of commodities accomplishes the same result. But why did our transportation system break down, if not from this same confiscatory Governmental regulation. All that is necessary for the law of supply and demand to properly function is the opportunity.

Threatened With Extinction

This is a gathering of middlemen, and I want to say, a class of the most efficient and indispensable middlemen to be found, but we are in the very center of this maelstrom. We are threatened with extinction by the very system to which I have referred, and I have made these preliminary remarks, only to, if possible, bring out my idea that the spread of co-operative societies is only a part of this socialistic doctrine. Our colleges are permeated with it. Have a heart-to-heart talk with your own boy, who has just returned from school, and see whether he has not become inoculated. It is even reaching down into our high schools. I do not wish to in any way disparage our educational institutions, and it is because I do value them so highly that I wish to warn against this menace to the susceptibilities of youth. I do not even question the sincerity and the good intentions of these educators who are assisting in the spread of this doctrine. It is a specious fallacy which has obtained an astounding following, and we must all admit that such men, removed from the practicalities of business life, are peculiarly susceptible to the sophistries of such highfaluting, deceptive theories; but never forget that a fanatic is always more dangerous than a knave.

But to get down to the concrete, we are today paying taxes for the maintenance and upbuilding of such bureaus as the Federal Trade Commission and of state schools of agriculture (I am not speaking of your Indiana University, of whose activities I have no detailed knowledge, but only of the system in general), who are prostituting their power and position by assiduously working overtime for the propagation of co-operative societies and the elimination of the middleman. They are of course, assisted by the class legislation of Congress and our state legislatures, and several particularly flagrant measures in this respect are before the present Congress, and some have already received the approval of the lower house.

You have doubtless noticed the questionnaire which has been presented by a national farmers' organization to a number of active presidential candidates, and, if you have, you have noticed that not one candidate has had the courage to reply with the strictly American ideal of fair play to all and special privilege to none. Let no one understand me as having one thought or wishing to say one word inimical to the farmers of this country. On the contrary, if any one class is to be shown special privileges, I prefer that it be to the farmer. But why any? I have enough confidence in the farmer to believe that he is able to stand on his own bottom and does not need to be pauperized by the acceptance of bounty from the Government of the United States.

Co-operative Idea a Delusion

I am in favor of the elimination of all middlemen and the substitution of the co-operative society for the present system of marketing and distribution, if it can be done on an open and competitive basis, but I know that it can be done permanently only with the assistance of paternalism and class legislation, and to that I am unalterably opposed, and opposed because it will not promote, but destroy, efficiency. In my own mind, I know that the co-operative idea is a delusion and that eventually the worst sufferer will be the co-op. himself. Carried to its logical conclusion in our own business, the independent grain dealer is entirely eliminated.

All grain buying, at least at country points, is in the hands of co-operative societies. Their management is, of course, in the hands of salaried employees. Virtually they have no competition. What adequate incentive have they for efficiency. Take any line of country elevators and pick up an individual manager for each. Give him control of your plant and your bank account and grant that he is honest. Come back at the end of a year and what do you suppose would be the average result? You know. It would be appalling.

The whole co-operative theory is a fallacy, and aside from your personal business interests, you owe it to yourselves, as self-respecting citizens, to resist what you know is wrong; but what I have tried to impress upon you today is that you must fight this whole paternalistic, socialistic scheme, and not alone the particular organization in your own community. The farmer, in following the co-operative idea at the expense of his own business of farming, is the victim of a propaganda being conducted by a school of impractical idealistic thought, aided by the self-interest of a horde of agitators and an already powerful bureaucracy. Eliminate paternalism and its concomitant evil, class legislation, and the spread or even the maintenance of the present co-operative movement is impossible.

The Obligation on the Country Dealer

But the country elevator operator should never lose sight of the fact that he, himself, has a certain, definite, and fixed obligation resting on his own shoulders, and he should be the more impressed by the realization that his own success will be measured in almost exact proportion to the fulfillment of that obligation. By which I mean the efficiency displayed in the operation of his own business. The time is past for the indiscriminate dumping of grain into a car, regardless of grade and condition, and the pro-

miscuous consignments of such conglomerations to market. The grain business has become a science, and if we are to properly serve our customers and obtain a measure of success for ourselves, we must recognize that fact and make an intelligent study of grades and the proper market for each. We must furnish adequate facilities to our farmers for taking care of their crops. We must eliminate bad practices of every kind. We must study market, and crop, and general business conditions, and adjust ourselves and our business accordingly.

In conclusion, just as we should demand no special favors or consideration for middle men in general, or for the country elevator trade in particular, we should demand that none be shown to any other class, and with this security the continued life and prosperity of the country elevator trade is secure, as long as we show proper efficiency in the conduct of our business, for we are thus rendering ourselves indispensable, and this efficiency is really the only excuse that we have for existence.

Following the reading of Mr. Horner's paper the session adjourned for luncheon.

AFTERNOON SESSION

The afternoon session opened with an address by Andrew Smith, secretary Indiana Bankers' Association on the subject "General Financial Conditions and Outlook," from which we take the following:

Before going into this all-important subject, I should like to say a word to you regarding every-day conditions that you continually come in contact with—that is, the extension of credit to your customers and friends. Many of the members of your Association who handle and sell flour, feed, coal and other commodities on time and carry the same on open ledger accounts, and not a few of you loan farmers small sums of money from time to time and charge these loans up on your books to the account of the borrower, rather than urge the parties to secure such accommodations from the bank. I regard this as a time when all men should so conduct their affairs that they can utilize their assets to the fullest extent in bracing up their credit and keeping their assets in the most liquid condition that is possible, and when you find it necessary to sell upon credit or loan small sums of money to customers, you should insist upon the customers giving you a note for the same and make the note bear the current rate of interest, and have a definite due date, so that should you be compelled to borrow from the bank to provide capital with which to conduct your business, you can either discount your customer's notes (which are, as a general proposition, very acceptable to your banker, as you give him a two-name piece of paper and divide the liability) or you can place your customers' notes with your banker as collateral.

In our experience in loaning to our country bank correspondents, we always prefer that collateral consist of small, well scattered notes; we often look askance at collateral consisting of a few large notes. A few days ago a correspondent requested that we loan them \$20,000. We agreed to do so. When they sent their note in it was collateralized with one note of \$20,000 given by a farmers' elevator company. We would have felt much better about it if this note had been collateralized with 40 notes of \$500 each, executed by 40 farmers, each owning 160 acres of good land.

A word in regard to transportation. I need not call your attention to the demoralization existing upon our railroads. You experience it every day. With a shortage of 226,000 freight cars and several thousand locomotives, together with the shortage of labor, I see little relief in sight. Shippers should be extremely conservative about buying grain at high prices awaiting transportation.

Do Not Expect Cheap Money

Another warning note I should like to sound is that you should not expect cheap money. It is my opinion that the bankers of the country will be compelled to increase the interest rate which you are now paying, on account of the tremendous demand there is for money from all quarters. The largest banks are now paying the Federal Reserve Banks 7 per cent, and we do not know what day this rate will be increased. The Federal Reserve Bank of Kansas City has put into effect the newly authorized system of graduated rates of rediscount—increased as individual banks borrow above certain limits set for them. The Government has been obliged to raise the rate it pays on certificates of indebtedness to 5½ per cent for six-months certificates and 6 per cent for one-year certificates. The commodity liquidation which appears to have gotten under way in some quarters may lighten the burden upon the banks, and it may be that the worst of the credit strain has been passed. But prediction proves difficult because of the large number of factors that enter. The autumn always brings additional demands to move the crops. The banks will doubtless continue for a time to be called upon to finance our export excess.

Financiers regard any indiscriminate calling of loans or any indiscriminate refusal to renew loans as out of the question. "Deflation" at the cost of essential production is not desirable. The banks of the nation will continue to do their duty, and there is no doubt that with the splendid help of the Federal Reserve System they will be enabled to safely tide over this stringency.

Mr. Smith was followed by John W. McCardle, member of Indiana Public Service Commission, who spoke on the subject of "Car Service and General Business Conditions." Mr. McCardle said he was one of the early members of the Indiana Grain Dealers Association and told how the organization had been most helpful in the first days of its existence. He spoke upon the value of friendship in business and pointed out some of the difficult problems that confronted the trade today. He related how Congress had taken all authority from the State Public Service Commission and the resulting chaos and inefficiency in the matter of car service. Indiana, he said, could not run its own business and what they desired was to have the Indiana Public Service Commission put on the same basis as the commissions of neighboring states. They were going to Washington and ask permission for authority to keep cars moving so that better service would be rendered.

H. H. Potter of Potter & Sawyer, Rensselaer, Ind., read a paper on "Cost of Handling Wheat at County Elevators." This paper in its essentials

was published in this magazine in April when Mr. Potter read it before another meeting.

ADDRESS BY L. F. GATES

Leslie F. Gates of Lamson Bros. & Co., Chicago, and president of the Chicago Board of Trade, discussed the question of "Grain Exchanges and Future Trading in Wheat." Mr. Gates spoke at some length on conditions that lead up to the present situation in grain exchanges. He believed that the war had brought about a better knowledge of grain exchanges than ever before. It was now the general opinion among leaders in thought that the Chicago Board of Trade was the most economic vehicle for the distribution of grain in the world.

Mr. Gates related an instance of a farmer and leader from Minnesota, formerly hostile to the exchanges who having instructed his tenant to sell his wheat, found later that it had been sold at 50 cents under the Minneapolis price. Investigation showed that the farmers elevator company who bought the wheat had actually taken a loss before the grain arrived at the market. From being an enemy, this man had become a friend of exchanges.

Hearings in Government control, said Mr. Gates, have intensified the ruling that the grain trade wanted to get back to former conditions as quickly as possible. Speculation was not limited to grain, as ownership always involved a risk. All through the war the Government had had a monopoly in grain and this had caused the grain trade to feel that such things should not be permanent.

Mr. Gates also pointed out that there had also come from the war a greater recognition of the



RUSSELL G. EAST AND W. A. OSTRANDER

dependence of our open market in transportation. It had become more clear than ever that transportation at an open market went hand in hand in the development of this country. Although present prices are high, he expected the swing of the pendulum to gradually go the other way. There would come slowly the development of cheaper lands and larger foreign crops when the value of the surplus would fix the value of the entire crop. Looking forward to that time it seemed to Mr. Gates that we should co-operate more largely with the producer looking to the cheaper marketing of his product. He commended the Great Lakes-St. Lawrence project for an open waterway to the sea and asked that the Resolutions Committee consider this matter. He spoke at some length on future trading in which he gave some of the reasons why this should not be resumed too precipitately. He thought it unwise to start future trading until all trace of Government control had been removed.

AUDITING GRAIN BOOKS

A paper was then read by V. E. Butler on the "Auditing of Grain Dealers' Books, and its Importance," from which we take the following:

There is, perhaps, no business wherein details are such an important factor as in the country grain business. From the moment a country grain merchant enters his office in the morning till the day's work is finished, he is a slave to the little details of his business which are of so much importance that they either make a successful grain dealer of him or a failure.

If all this is done carefully and in complete detail, then there may be a net return to the grain dealer of a few dollars of profit, perhaps \$25 or more on a car load of grain of 80,000 or 100,000 pounds.

Every grain dealer knows this to be true, yet in my travels I find but few who have a complete record of their day's transactions. Some could not check up a day's receipts a week later because of the type of sale books used. Some make no record of the number of cars of grain shipped, or the dollars received for it, and nothing in detail as to the profit or loss from the business as a whole; they depend entirely

upon the showing of the bank account to tell them what their profit or loss has been for the year. Such conditions are not frequent, but I have found them to exist more frequently than is good for the business.

Grain has always been a cash commodity; therefore, in the early days of the business when margins were wide, the buying and selling of grain was the very simple transaction of delivering the grain and getting the money for it; but in the evolution of the business margins have grown smaller, volume has increased, demand has grown greater, competition has become keener, its use is more diversified, transportation has become more complicated, and more markets have developed. This development (and the end has not yet been reached) is bringing many very interesting practices into common use that in the old days were rare and seldom considered necessary for one to be successful. These practices all have a tendency toward bringing the business more into the limelight and to a better general understanding of its magnitude by the public.

Auditing Associations

Today we find that many dealers have a complete audit of their accounts made at least once each year, and in many places such an audit is made every three months. In the State of Kansas there is an auditing association that makes a specialty of auditing country elevator accounts, it being a part of the Farmers Grain Dealers Association. Mr. Lawrence, of Salina, Kansas, who is at the head of this feature of the association service, recently made a very comprehensive report of the work done. The report shows that 236 audits were made at an average cost of \$51.14 per audit, and in many cases they had recovered many times the cost of the audit. There were six permanent auditors used last year and six others were used for a part of the year. This year more permanent auditors are being employed, showing the growing demand for such service.

In these days of income tax reports, it has become necessary to systematize accounting and to know the exact results of business, and it would seem that the demand for a competent audit of a business has opened up a field in grain dealers' association work that should be taken up by all associations in the country, for it would be a self-supporting service and very valuable to the grain dealers and millers of this state. The daily routine of a grain dealer is one of details, and what would be more natural than that he will make mistakes which would likely be found by competent auditors?

The gradual building up of an auditing department by the Association will be the means of assembling information that will be of great value to you in meeting the problems of the future. The good results to you as individuals must be admitted. Some of you undoubtedly have, in the past, availed yourselves of the service of public accountants and know of the beneficial results both in your business methods and in the financing of your business.

Go to your banker for financial assistance, and one of the first questions he will ask is: "Have you a statement of your business?" If you are able to lay before him a comprehensive statement of your business, it indicates to him that you have a clear conception of your business and have records that are dependable. If you are able to say to him that the statement has been checked up by a competent auditor, who is a public accountant, it makes it that much stronger. You will get careful consideration and establish a basis of credit very valuable to you if there ever comes a time of difficult financing. You have combined the strength of your personality with cold figures.

This service backed by grain men could be put in charge of competent men, who in a very short time will become a valuable asset to the business as a whole as well as to this Association.

Conditions Ripe for an Association Auditor

There have been attempts in the past to promote such a department in connection with association work in the Northwest but the associations were weak and the auditing departments soon passed into the hands of individuals; but here you have a strong, active millers' association as well as a grain dealers' association, which, by combining their efforts, should make a greater success of this feature of association work than has been done in Kansas, and there it has been a great success because the conditions are ripe for such a service. It is a service that can be extended to every grain dealer or miller.

It may be presumption on my part to indicate to you my ideas of handling this question, but I am going to take the risk. From the standpoint of expense, I believe the Association can get a competent man for less money and can make more favorable terms with parties to carry on the work than the individual, for the reason that it costs money to go and fight for business of this character, and an accountant of standing can readily be procured at a reasonable charge, because the employment would come to him, and it would not be necessary for him to go out and look for it, which would mean a considerable idle time for which he would require pay when he did work.

A committee should be authorized to regulate the compensation for the service. In Kansas, I believe, it is all done by the day and actual expenses.

The auditor should report to this Association the work performed. He should report the recoveries made by dealers. In other words, he should always be under the control of the Association because it is the Association that gives him his standing with the trade, and he in return should make complete detailed reports of his findings with recommendations for the betterment of accounting systems. The committee, through the auditor, should endeavor to systematize accounting to meet the requirements of the grain business, so that bad practice can be gradually eliminated from the business.

The man selected for auditor should be a very high class man in every respect. One that would be energetic and capable of building up the service to its full development, for you will find there will be other classes of business calling for his services, and while the service should be in the first instance purely for grain dealers and millers, the service should be extended to other industries in which grain men and millers are interested.

It will take time to fully develop the usefulness of the service, and for the first year one man will perhaps be all you will need. Five years ago there was but one auditor in Kansas, but today there are eight men employed the year around, besides as many more at certain periods of the year. I mention this to give you an idea of what may be expected to be the results in this state.

The man selected to look after this work should be an efficiency man as well as an accountant, and should be able to recommend short cuts in accounting, and also be able to make recommendations as to other matters of business.

I feel that the work once begun will develop itself along lines pointed out by experience to be the best.

and have more far reaching results than anticipated, just as all other pioneer experiments have done.

P. E. Goodrich, president of the Grain Dealers National Association delivered a brief address in which he first commended the excellent program arranged for the meeting. His company, he said, had just closed its fiscal year and they had been astonished at the cost of doing business during the past 12 months. With the same number of elevators the increase was 185 per cent over 1915. He said that an 8-cent margin would not do this year.

Mr. Goodrich could not see a ray of hope in the railroad situation. Good men were daily leaving the railroad and going with automobile companies because they could get higher wages. He did not think that Mr. Smith knew farmers for if the average farmer was advised to hold his wheat he would haul his grain in all night fearing a decline in prices. There was not one farmer in 10 who was fixed to hold his wheat.

In closing, Mr. Goodrich spoke about the meeting in October at Minneapolis, Minn., of the Grain Dealers National Association and invited all present to attend it.

The meeting closed with the adoption of the report of the Committee on Resolutions, which provided that the Association oppose the tendency toward paternalism in government; opposed change in the 30-inch car loading rule; recommend conservatism in business; oppose loaning money by dealers to producers; recommend preparing for increase freight rates; recommend each dealer to find his cost of handling grain; endorse the Great Lakes-St. Lawrence waterway project; urge more cars for moving coal; urge the grain exchanges to open; refer Mr. Butler's suggestion to the Board of Managers with power to act.

MIDSUMMER NOTES

The Grain Dealers Association, the Indianapolis Grain Dealers and the Indianapolis Board of Trade combined as usual in giving a dinner and entertainment on the evening of the close of the meeting. It was held at Athenaeum Building and 300 tickets were distributed which well filled the banquet hall. The dinner was excellent, and a bright, snappy program was given consisting of songs, dances and monologues. Frank McComos obliged with a reading which resulted in a request for more. As early trains took a good number of the grain men home before 10 o'clock, the entertainment drew to a close at about that hour.

Joe L. Doering, representing Southworth & Co., was present from the Toledo market.

Chas. B. Riley was on the program for the dinner and entertainment as "Master of Ceremonies,"

of A. C. Gale Grain Company; Chas. G. Hagerty and W. S. Wishardt of Fitzgerald Bros. Company; F. M. Winkler of Mutual Commission Company; L. McLaughlin of Dan B. Granger & Co.; J. H. Martin of Brouse-Skidmore Grain Company.

A very good delegation came out from Buffalo including J. J. Rammacher of Eastern Grain, Mill & Elevator Corporation; I. W. McConnell of



ICE CREAM WAS DISPENSED BY THE CLEVELAND GRAIN & MILLING COMPANY

McConnell Grain Corporation; F. J. Schonhart, of Electric Grain Elevator Company; M. Purcell, of Armour Grain Company; Mark Steele, of Townsend-Ward Company.

Frank A. Witt, while dispensing cigars and souvenir lead pencils said he never felt better in his life.

It might have been Eddie Shepperd who wrote the following lines of poetry and then again it might not. But anyhow, the Cleveland Grain & Milling Company's refreshments were better than its verse. The company served ice cream, cake, etc., in its offices and the invitation thereto was extended as follows:

Mr. Grain Man—

We are mighty glad to have you here,

Sorry we can't serve you beer,

But come to our office and "shake,"

And we'll set 'em up to ice cream and cake.

The paramount feature of the Bert A. Boyd Grain Company exhibit was—a little brown jug. Government officials need not worry, however, as it con-



BERT BOYD AND THE LITTLE BROWN JUG

It sounds as though this officer ought to do something but we can produce witnesses to affidavit that Mr. Riley never done a darn thing.

W. F. Morgan with John T. Fahey & Co., and John W. Snyder of Hammond, Snyder & Co., represented the Baltimore Market.

Pittsburgh seldom misses an Indiana meeting, so was there with J. A. A. Geidel, of Geidel & Leubin and R. W. Young, of Young & Fisher.

C. L. Flora and J. B. Van Voorst of the Reliance Construction Company represented the grain elevator construction business at the convention.

The Chicago market was represented by Leslie F. Gates, of Lamson Bros. & Co., and president of the Chicago Board of Trade; A. E. Wood of E. W. Bailey & Co.; Geo. A. Wegener of Wegener Bros.; M. L. Vehon of M. L. Vehon & Co.

L. W. Forbell of L. W. Forbell & Co., of New York City, attended the convention and incidentally was looking up the wheat business. He thought there would be a good movement fairly early but would not go to Eastern markets much before July 15.

From Cincinnati there came: W. J. Buhrman

tained nothing contraband. This office served refreshing punch, delightful cigars and the most cordial hospitality from all its members. Singularly too, there was no camouflage.

The Lew Hill Grain Company served 12 o'clock luncheon, termed a "Convention Special" in their office rooms, 426-427, and about every grain man was to be found there at some time between 12 and 1:30 o'clock. It was a real feed, too, enough to satisfy the inner man and then some. The company's card of invitation read:

Eats, we have plenty, soft drinks on tap,

Our door is open, you don't even rap,

Take this for its worth; it's a darn good hunch,

Make your plans now and follow the bunch.

Leroy Urmston, of Urmston Grain Company, who at the time of the convention was visiting in Seattle, Wash., was expected to make the trip through Yellowstone Park and be home about the middle of July.

H. M. Rudeaux, of Merchants Grain Company, reported that business is on a new substantial basis and confidence coming back again. He looked for lower prices in hay and larger movement; coarse grain seemed to be in better demand.

OHIO DEALERS IN ANNUAL MEETING AT CEDAR POINT

The annual meeting of the Ohio Grain Dealers Association was held at Cedar Point on June 30 and July 1. After the opening ceremonies were concluded President O. W. Cook gave his annual address, in part, as follows:

If it were not for the nature of the address supposed to be given annually by the President of this Association, my desire would be to place my remarks under the caption of "Service," as this theme appeals very strongly to me as one very befitting to the occasion. However, there are so many different vital subjects which ought to be given at least slight mention that it will not be a difficult task for me to enter more or less into generalities; therefore, precluding the privilege of attempting to confine myself to one subject.

Just as we are passing into a period of reconstruction we should lay our plans to offset any serious ill effects generally resulting from deflation—a condition which positively must be experienced in the reconstruction period just ahead. In grasping about for remedial assistance on our journey is it not best to place confidence in the stabilized financial system of the greatest, richest and best nation on earth? With this and the confidence that we repose in the judgment of our capable business men of this country, we have a tangible working policy which will pilot us safely to a safe, sound normal period. We much rather court such proceedings than to feign that, as a necessary means to the desired end, we must experience commercial abrasions and the excruciating pangs in the remedy known as a panic. Now, what action is necessary to affirm this proposition? A momentous task it would be to offer a specific or panacea which could and would be universally accepted as a sure remedy to carry us through. To simplify the matter, let us first take a liberal dosage of "common sense," get on the job and work.

Generally speaking, the successful grain man must, as usual, have or tender ample credit to cover the purchase of his merchandise, and in a period of reconstruction, this essential factor should be jealously guarded, for the consummation of gain or loss in our business is contingent more or less on this element, and whether or not it is advisable, in lieu of a reasonable supply of cars at harvest time to make heavy purchases of grain—especially wheat—this matter should have the serious consideration of every dealer, as we have no guarantee of the retention or subsequent increase of purchasing values other than hedging in the future market; so again let us suggest concentrating such efforts as will best affect the immediate future of our business.

After all, even though our particular business is only a tiny portion of the intricate commercial machinery of this country, it is a vital necessity to maintain to a nicety the adjustment of its executive part. We are proud that we can creditably execute tasks given us.

Let every grain man incorporate in his commercial procedure, as a part of his working standard, that we hope not exclusively for remuneration alone, but that we give some thought to the ideal that the expenditure of personal mental and manual force ultimately converges—physically speaking—into a satisfying resultant force, namely, service to humanity.

REPORT OF SECRETARY

Secretary-Treasurer J. W. McCord gave his financial report which showed a balance on hand of \$440.95, and then read his secretarial report as follows:

During the past seven months the duties of your secretary have been administered on his part with much stress and interruption on account of his continued illness. However, owing to the kindly aid of President Cook, who is located in business very close to my office, and with the assistance of Miss Welper, who has served the Association for many years as assistant to the secretary, the affairs of the Association have been efficiently and ably conducted.

President Cook has devoted much time and effective effort in the work, other than the duties of his office. For myself, and voicing the sentiment of our membership, we owe to him a debt of gratitude that cannot be paid by words of appreciation; he has lightened the burden that has rested on my shoulders, he has relieved me from anxiety for the welfare of the Association during the months of physical weakness through which I have passed. Many of our loyal members have rendered personal service in the work, and many have by personal call, by letter and verbal message brought sunshine and pleasure to me during the long days of waiting.

We are about to enter a new era, a new epoch in the grain trade; drastic governmental regulation is of the past; history has been made that will serve us well as example and precedent; we come again into our own, we can by united effort build up a big, strong structure, greater than has ever before been the larger factor of the commercial activities of the country; let us all do our very best with all the honor, integrity and dignity we possess.

WEDNESDAY AFTERNOON SESSION

The afternoon session opened with an address by Charles Quinn on "The Grain Dealers National Association." He began by saying that his subject was so broad that it gave him an opportunity to talk about anything that might suit his fancy.

"It is idle," continued Mr. Quinn, "for me or anyone else in this room to predict what the future will bring because this war has so over-turned the ideas and theories of everyone that we all hesitate to say anything about the future."

"We all know, for example, that the prices of everything we consume are high. We have our own ideas as to what made them high. Another man will say it is lack of production. So long as Europe must have our surplus, things will be high in this country. I have attended some 30 conventions since the armistice, and they all ended up by saying what we needed is more and better production. We thought a year and a half ago that we were to have a revolution, but we have gotten over that now. We all see now that nothing can take the place of capitalism."

"Now, with reference to the National Association,

Mr. Goemann who is one of the best posted transportation men in the United States and who has done more than anyone else for the National Association, is here today and he will discuss in detail the transportation question.

"The National Association has never undertaken more than one or two things at once, but always finishes the job. The matter of the maintenance of side tracks and especially as concerns you gentleman who lease from the railroads or have property on the railroad which is served by a spur from the railroad, is of interest. The railroads began a policy back in 1912 or 1913 when Louis Brandeis, now a Justice of the Supreme Court, said that the railroads were losing one million dollars a day because the railroads are not charging the shippers enough. The railroads attempted, under Government ownership to inaugurate many policies. One thing they did was to charge the shipper for the maintenance of the side track. If a tie or two rotted under the spur near your place, they would fix it and charge you up with it, and another thing they put in your leases, they made the shipper responsible for any accident or fires that might occur on that property. Another thing, in the old days you know when they put a new spur into your plant, the shipper paid for it and the carrier had an arrangement with the shipper whereby he would pay usually \$2 per car. The National Association has striven, through Mr. Goemann, to see that all this work in connection with the leases, liability clauses in leases, the maintenance of side tracks and the building of new spurs can be put in one petition to the Interstate Commerce Commission and the purpose is to take up the whole subject before the Interstate Commerce Commission and see if we can clear up this matter that would take away all his common law rights.

"Another thing which the National Association has just taken up and will be explained to you by Mr. Goemann this afternoon, is the liability of telegraph companies for errors, etc. This refers largely to every grain man in the country. Very recently, the Interstate Commerce Commission had jurisdiction over the telephone and telegraph companies. They held that telephone companies were common carriers. It placed under the jurisdiction of the Interstate Commerce Commission full control over rates, liabilities and all charges of the telegraph lines. The National Association had had for at least 15 years, a committee to see if something could be done to make the telegraph companies change the printed conditions they have on the back of the telegrams. They are liable for not more than \$50 which makes the liability really worthless because most every claim amounts to a great deal more than \$50. The National Association has undertaken this work and will appear before the Industrial Examiners in New York on July 26.

"The Commission is now hearing the question of increasing the freight rates and we take it for granted that the Commission is going to increase the rates to perhaps about 25 per cent. Notice will doubtless be given shippers, say about 30 days. Remember this in your contracts,—have it understood that if there is an increase in freight before the grain is shipped, have an understanding with your party as to who will pay it.

"On the 7th of July the big Committee of 48 that was appointed on May 7 at the La Salle Hotel, will meet. One of the things this Committee is likely to recommend, I am told, is that deliveries can be made on the following month upon the expiration of an option upon the payment of 1/4 of 1 per cent per day. The purpose is to prevent a corner arising through no cause of the market itself, but through a transportation condition."

President Cook appointed the following committees: Resolutions: L. W. Dewey of Blanchester; Henry L. Goemann of Mansfield; W. S. Cook of Columbus; George E. Stephenson of Rosewood and A. M. Daugherty of Derby.

Nominations: J. H. Moltz of Brice; D. R. Risser of Vaughnsville; Philip Horn of Monroeville; Harry Rapp of Sabina; O. P. Hall of Greenville.

Auditing: A. H. Cratty of Columbus; Tom Stephenson of Maplewood and W. Frank Heffner.

MR. GOEMANN'S ADDRESS

Henry E. Goemann gave a wealth of good advice in a short address on "Transportation."

"I would like to call attention," he said, "to Docket 9009 which the Interstate Commerce Commission put out on January 13 for the claims for loss and damage to grain. Many grain men have not seen it, and I suggest you get this Docket and study it and comply with it because you will have claims that will be turned down and you will have no recourse. This Docket 9009 is not final and you still have the right to go to Court."

Speaking of the car loading rule Mr. Goemann said: "The old rule was 30 inches and the proposed rule is 24 inches at the side walls of the car, and I have recommended no change from the old rule of 30 inches, but what action will be taken I don't know—we will soon hear from them. The Railroad Administration rule, 'Loading to Capacity of Car' is still in effect. I advise loading in compli-

ance with the Railroad Administration rules, if you do not load to capacity you must pay the penalty.

"It is very difficult to go to Washington and get these cases decided quickly. The Interstate Commerce Commission has a case on its docket since January 5, 1914, running 6 years. Do not sign the contract that the railroad's are asking you to sign at this time, and if they insist upon it then offer to sign the contract with the condition in the contract that upon the outcome of the findings of the Commission,—that your case will be corrected in accordance with the findings. There are four important points—the construction of new tracks, the rent of land, the maintenance and upkeep of side track, and the liability feature.

"The problem for all of us is the car situation. The car building capacity on box cars is about 100,000 box cars a year, and the ones now in use are in horrible condition. The switchmen's strike is still on and the men are not working and in some cases the clerks are doing the yard service. About new equipment,—the New York Central will spend \$43,518,300,—196 locomotives, 4,000 steel box cars, etc., which they expect to have in the next year. It is not possible for less than car-load lot ship-



PRESIDENT O. W. COOK

pers to secure cars. We recommend that an embargo be placed on all less than car load shipments excepting foodstuffs."

Mr. Goemann then discussed the liability of telegraph companies for missent messages. He advocated an insurance charge of 1 cent for every \$500 with a limit of liability to \$5,000. He wants the plan tried out for a year and asked the endorsement of the Association on it, which, upon motion, was given.

E. C. Eikenberry of Camden, ex-president of the National Association spoke on "Some Political Conditions in America and How They Affect the Business Man." He spoke at length of the evils of political interference with the law of supply and demand, and strongly urged a more immediate response by legislative bodies to emergencies that arose.

H. P. Miller, director of the Farmers Institute of Ohio, explained the nation-wide movement among farmers for organization and co-operation. The movement embraces four problems: Organization; Education in the way of spreading of general information and understanding among all classes; legislative program; and the establishment of a more economical system of distribution. He asked for the co-operation of the grain men in the movement.

THURSDAY MORNING SESSION

The Thursday morning session opened with an interesting address by R. T. Miles, head of the Field Supervision Office in Chicago, from which we take the following:

Grain inspection as it is known today had its origin in Chicago in the year 1857 under the auspices of the old Board of Trade, which was at that time a mutual association. In this connection it is significant to note that the only attempt toward a series of grades was in respect to red winter wheat, which was classified as red winter or No. 2 red winter, in accord-

ance with its apparent quality. Spring wheat, white winter wheat, corn, and oats were traded in without any effort toward classification.

In the annual report of the Chicago Board of Trade for the year 1857 appears the following statement: "The grain trade, which undoubtedly holds supremacy over all others in Chicago, presents the need for stringent grading rules, in view of the practice adopted by farmers, shippers and exporters, of mixing grain of inferior quality with that of better quality, and the subsequent application of such grain on contracts for grain described as of good milling quality."

The further statement appears, that "complaints were registered by eastern buyers and European importers as to the quality of grain applied on contracts."

Here we have the first recorded instance of unfair and unethical mixing, and the acknowledgment by an organized trade body of the necessity for curbing such practice.

The First Grain Inspection Committee

The Chicago Board of Trade, pursuant to its expressed determination to enhance the integrity of its inspections, accordingly appointed a grain inspection committee which appears to be the first of its kind in existence anywhere. It was composed of J. S. Rumsey, S. H. Butler and C. S. Dole. This committee on June 15, 1858, appointed George Sitts chief grain inspector and established the following grades for grain: Chicago Club wheat; No. 1 Spring Wheat; No. 2 Spring Wheat; Rejected Spring Wheat; No. 1 White Wheat; No. 1 Red Winter, No. 2 Red Winter, Rejected Red Winter; grades 1 and 2 and rejected were also promulgated for corn, oats, barley and rye. The grades adopted at this time were not in any way defined or interpreted and were applied by the chief inspector (with the assistance of the grain inspection committee) in accordance with his judgment of comparative qualities.

A new phase was introduced into the evolution of grain inspection when, on August 20, 1866, a revised set of grades was adopted by the Board of Trade of the City of Chicago Inspection Committee (this exchange having been incorporated in the year 1859) in connection with which definitions for the various grades were formulated. Here we see No. 1 corn first described as "sound, dry, plump, and well cleaned;" and No. 2 corn as "all other corn dry and merchantable and reasonably clean;" and rejected corn as "wet, very dirty, hot and otherwise badly damaged or unfit for warehousing."

The system of grading instituted at that time was maintained with frequent revisions and amplifications, until Federal standards were adopted under the authority conferred in the United States Grain Standards Act.

While Chicago was the first market to recognize the necessity for inspection of grain by a disinterested party, other exchanges, notably the Toledo Produce Exchange of Toledo, Ohio, instituted a similar service at a comparatively early date. Other exchanges followed and by the year 1870 practically all markets dealing extensively in grain had adopted grain inspection rules and had organized grain inspection departments charged with the application of them.

Illinois the First to Adopt State Inspection

Illinois was the first state to take over the inspection of grain, and William F. Thompson the first chief inspector in that state, was appointed July 3, 1871, under the authority conferred by the State Railroad and Warehouse Act. Minnesota, Missouri, and Kansas instituted state inspection service later, in the order named. More recently a number of Western and Far Western States, notably Washington, Montana, Oregon, Idaho, and North Dakota, have passed state inspection laws. A number of other states also have inspection laws on their statute books which, however, are not operative.

The theory that the state, being a disinterested party, should be able to perform inspections more satisfactorily than board of trade inspection departments, appears entirely sound. However, the advantage that is gained by a disinterested administration of the state departments has been more than offset in many instances by a lack of efficiency due to the appointment of employees as the result of political preferment rather than from a true showing of competency.

As the various state grain dealers associations were founded and grew into prominence they demanded a more efficient inspection service and added protection to the rights of the country shipper, with the result that state and exchange inspection departments were gradually renovated and improved.

However, with the heavy growth in the merchandising of grain, due to our ever increasing production, and the coincident broadening of our domestic and foreign demand, new exchanges sprang up in all parts of the country, and a keen competition between the various markets followed, with the result that in many cases the inspection of grain took on the appearance of "jockeying" for business from country points or to the seaboard or distant domestic buyers. This condition of course resulted in chaos in the grain trade, insofar as the value of an inspection certificate in one market was accepted in another.

and was the underlying reason for a demand for uniformity of inspection.

It is said that a former chief inspector of the Illinois State Inspection Department should be credited with first giving formal expression to the desirability of uniform rules for grading grain. The exact date is not available, but was probably about 1890. In 1902 the Chief Inspectors National Association in convention at Peoria, Ill., adopted a set of rules which were recommended for general use in all grain markets of the United States, but which did not meet with general endorsement by state and exchange inspection departments. The agitation thus engendered bore fruit, however, in the fact that a Uniform Grade Congress was called at Chicago for December 11-13, 1906, under the auspices of the Grain Dealers National Association, which organization had become a powerful influence in the grain trade. This Congress was attended by representatives of the majority of the inspection departments, by national association officials, by officials of state associations, and by officials from the United States Department of Agriculture in charge of grain standardization. It is significant that a resolution was adopted at this Congress to accept the invitation to co-operate with the U. S. Department of Agriculture's project of grain standardization, in that it marks the inception of a formal acknowledgment by the grain trade of the advisability of clearly defined standards for grading, and the inadequacy of former methods.

The movement to standardize the grades of grain was given added impetus at this time through representations made to our State Department by European countries, relative to the unsatisfactory quality and condition of American grain sold by grade to those countries.

The Grain Standards Act

The next suggestion, which in view of all the circumstances surrounding the matter was the most logical one, was legislation looking toward Federal supervision of the existing grain inspection departments of states and exchanges, and was brought to a focus by the introduction of a bill in Congress by Representative Moss, which bill was given the endorsement of the now powerful and efficient Grain Dealers National Association, and a number of the state organizations, as well as of many of the principal grain exchanges of the United States. This bill was not entirely satisfactory and was not passed, but another was introduced by Congressman Rubey, which embodied the salient features of the Moss Bill, and was passed by the Sixty-fourth Congress under the caption of the "United States Grain Standards Act," approved August 11, 1916, and provides for investigation by the Secretary of Agriculture of the handling, grading and transportation of grain in order that he may fix and establish standards of quality and condition for corn (maize), wheat, rye, oats, barley, flaxseed, and such other grains as in his judgment the usages of the trade may warrant and permit.

Investigational work and the adoption and application of standards for the grading of grain was placed by the Secretary of Agriculture under the direction of an organization known as the Grain Division of the Bureau of Markets, and standards for shelled corn became effective December 1, 1916; for winter wheat, July 1, 1917; for spring wheat, August 1, 1917; and for oats, June 16, 1919.

Federal Grain Supervision

The project of the Grain Division which is charged with the application of the official standards and the enforcement of the regulatory features of the Grain Standards Act is known as Federal Grain Supervision, the officers of which believe that their duty to the grain trade is best discharged when they conduct their work from the standpoint of service. Therefore, supervision activities have been organized with the idea of service always in mind, which has resulted, it is believed, in a simple system of procedure which in no way obstructs the legitimate machinery which the trade has built up for the purpose of facilitating the merchandising of grain and grain products.

In the period from March 3, 1919, to June 18, 1920, 117,079 samples have been handled by the various district offices, and the record of every licensed inspector, whose work was thereby supervised, has been carefully analyzed and recorded, in order that intelligent efforts may be made constantly to improve the quality of the inspection service. Of this number 13,143 were appeals from the licensed inspectors' grade.

Four hundred and fifty licenses have been issued to inspectors in all parts of the country, which number is an increase of about 40 per cent since the inception of supervision service, and the number of places at which inspection service is performed has, in the same period of time, increased about 140 per cent. The examinations to applicants for licenses are arranged with the idea of bringing out the actual competency of the applicant to grade grain, primary consideration being given to his integrity and general ability.

President P. E. Goodrich of the National Association gave an interesting address in which he told of his visits to the various state association meet-

ings, this being the first time he had visited Ohio. He told of the coming meeting in Minneapolis and invited all to attend. The high cost of living was given attention, but Mr. Goodrich warned of the danger in trying to control details of the phenomena instead of taking the broader view of considering the fundamental causes and their cure.

V. E. Butler, of Indianapolis, talked on "Capitalization and Over-Capitalization of Grain Elevators." He stated that many dealers with temporary surplus profits were expanding their business and enlarging their houses for beyond normal requirements, and that this would prove a disastrous burden on the community which would be called upon to pay the increased overhead of the plant. The paper was of great importance and we hope to find room for it in a future issue.

J. Vining Taylor, secretary of the National Hay Association, spoke briefly of hay conditions. He predicted a good crop as Government returns showed a promise of 111,790,000 tons, as against 108,600,000 tons last year. He spoke of the critical bale tie situation and stated that there was not more than 60 per cent of the necessary wire available. He took occasion to extend an invitation to the annual Hay convention at Cincinnati on July 13-15.

RESOLUTIONS

L. W. Dewey presented the report of the Resolutions Committee which was adopted. The resolutions provided that the Association urge upon



SECRETARY J. W. McCORD

Congress to take care of all disabled soldiers, but not to give a general bonus; approve the decision of the Secretary of Agriculture against the proposed changes in the wheat grades; demand the repeal of laws permitting interference of Government in private business and opposing Government ownership of public utilities; resolved that all disputes between public service corporations and their employees should be referred to a Board of Arbitration acting in conjunction with the Interstate Commerce Commission, and urging the passage of the law to provide for this; recommend an advance in freight rates; urged revision of internal revenue laws and repeal of excess profits tax; urged improvement of internal waterways and especially a barge canal connecting the Ohio River and Lake Erie.

NEW OFFICERS

J. H. Moltz for the Nomination Committee, presented the following names the report being accepted and the officers declared elected: President, O. W. Cook, Columbus; vice-president, S. B. Swope, Amanda; secretary-treasurer, J. W. McCord, Columbus. Governing Board: Fred Mayer, Toledo; George E. Stephenson, Rosewood; W. Frank Heffner, Circleville. Arbitration Committee: E. W. Scott, Columbus; J. H. Moltz, Brice; E. O. Teegarden, Duvall.

Then the new officers were introduced and made brief remarks and the meeting adjourned.

NEW YORK DEALERS TO MEET

The annual meeting of the New York State Hay and Grain Dealers Association will be held at Syracuse on August 12-13. More attention will be given the grain business than at other meetings. The railroad situation will be prominent in the discussions, A. H. Smith, president of the New York Central lines, being one of the principal speakers on the program. Another speaker whose address will carry a message will be William E. Murphy, secretary of the Horse Association of America.

SEEDMEN MEET AT MILWAUKEE

Milwaukee welcomed the American Seed Trade Association to the best meeting ever held by that live organization on June 23-25. After the formal opening of the meeting, Secretary C. E. Kendel read the reports of the secretary and treasurer, and President E. C. Dungan gave his annual address. He paid his respects to George Scarlett, vice-president, who relieved him during a term of illness of several months' duration. A compilation of the feed laws of all the states has been made and members were urged to subscribe to their printing.

Mr. Dungan discussed the free seed distribution appropriation which was passed by Congress, amounting to \$239,000 and recommended a resolution condemning this waste. He urged support of the National Garden Bureau to interest the public in gardening, and recommended greater co-operation between the seed associations in legislative matters.

The morning session ended with a report by the Committee of Postal Laws. Unfortunately a large part of the time of the convention was devoted to executive sessions so that the reports and discussions are not available.

AFTERNOON SESSION

The afternoon session opened with a report by the committee, appointed last year to confer with the Association of Official Seed Analysis of North America. After some discussion and upon motion the committee was continued.

The Committee on Express gave its report. This was followed by a discussion on nomenclature which was started by Francis C. Stokes and ended with a resolution to appoint a committee of five to confer with the Vegetable Growers Association to devise a system of nomenclature which would be more specific and uniform than is now in use. An appropriation of \$250 was made for the use of the committee.

J. Horace McFarland of Harrisburg, Pa., read an interesting paper on "Nomenclature," which brought out forcibly many of the points which had just been under discussion.

A. L. Stone of the Wisconsin State Department of Agriculture made an address on "Seed Testing Experiences." This paper discussed the State Seed Law and how it had worked out in 10 years of operation. He treated particularly the questions of seed mixtures, incorrect labels and hard seeds.

WEDNESDAY MORNING SESSION

After an automobile trip to the new plant of the Teweles Seed Company, the convention was called to order to hear the report of the Committee on Experiment Stations, read by L. L. Olds. He took up in detail the particular problems that are encountered in the various states. In Alabama it is the need of name registration for cottonseed; in Arkansas, better seed and a seed law; Colorado suggested naming place where seed is grown; Delaware, certification of seed; Illinois needs a state association; Kansas reports success with Kanred wheat and Kansas Fulghum oats; Maryland boosts its seed law; Nebraska condemns confusion in naming potato varieties; Massachusetts had no complaints or suggestions; New Jersey preserves seed corn by reducing moisture; New York is organizing a seed testing laboratory; North Dakota offered three suggestions: Rotation for seed crops; field or seed-lot inspection; a national law. Oregon wants national seed grades; South Dakota paying attention to registration of seeds with their source; Texas has a new feterita called "Spur"; Washington urges better methods of growing seeds; Wisconsin tells of its pure bred seeds.

A paper on "The Fine Turf Grasses, With Special Reference to the Seed Supply," by R. A. Oakley of the U. S. Department of Agriculture, was read by George C. Edler. The fine grasses used for lawns or golf courses are confined, or should be confined to Rhode Island, creeping and red top bent, and German and Chewings red fescue. On sandy soil in the north red fescue makes better lawns than do the bents.

WEDNESDAY AFTERNOON SESSION

The afternoon session was largely consumed by a discussion of the National Garden Bureau, following a report of the Advertising Committee by Leonard H. Vaughan of Chicago. It was unanimously decided to continue the Bureau.

The Hamilton Advertising Agency proposed a national advertising campaign of \$500,000 to be paid for by a tax of one-tenth of a cent on every package of seed. The discussion of this proposal was put over for another time, but on Thursday the plan was turned down for the present.

The session ended with the adoption of a declaration of principles, proposed by W. G. Scarlett:

Resolved, That the American Seed Trade Association does now clearly and solemnly affirm and pledge its sincere and active support of those principles of honest representation of seeds and other commodities sold or offered for sale by catalog and otherwise by members of this Association and seedsmen generally. This Association believes in and encourages the enhancement of the value and volume of agricultural products by the improvement of the quality of seeds; the elimination so far as practicable of weed seeds and compliance by seedsmen with fair seed laws and

regulations. Furthermore, we condemn any seedsman as unworthy of membership of this Association whose practices violate the aforesaid principles.

Thursday Session

F. B. King, chairman of the Resolutions Committee, offered a number of resolutions which were adopted. These included: That future purchases abroad be on the same terms as domestic, i. e., the right of inspection before payment; and approval of a plan to establish an office in London.

Clifford Corneli extended an invitation to meet next year in St. Louis. This will be decided by the Executive Committee later.

The constitution and by-laws were amended to permit other associations in this country and Canada to join the association through one representative each, but not to take effect until next year.

The new officers elected are as follows: President, H. G. Hastings, of H. G. Hastings Company, Atlanta, Ga.; first vice-president, L. L. Olds, of L. L. Olds Seed Company, Madison, Wis.; second vice-president, Alexander Forbes, of Alexander Forbes & Co., New York, N. Y.; secretary-treasurer, C. E. Kendel, of Kendel Seed Store, Cleveland, Ohio; assistant secretary, E. C. Dungan, of William Henry Maule, Inc., Philadelphia, Pa.

Executive Committee—Kirby White, of D. M. Ferry & Co., Detroit, Mich.; Chas. C. Massie, of Northrup, King & Co., Minneapolis, Minn.; John L. Hunt, of Jerome B. Rice Seed Company, Cambridge, N. Y.; Leonard H. Vaughan, Vaughan's Seed Store, Chicago, Ill., and E. C. Dungan.

A silver loving cup was presented to the retiring president, E. C. Dungan, after which the meeting adjourned.

GRASS SEED DEALERS MEET

The Wholesale Grass Seed Dealers Association met at Milwaukee, Wis., on June 21. The discussions covered the trade problems which confronted



POLK SYSTEM STACK AT KOKOMO, IND.

the trade, and the following firms were admitted to membership: The Bartelds Seed Company, Lawrence, Kan.; Courteen Seed Company, Milwaukee; Crawfordville (Ind.) Seed Company, and J. J. Buffington, Baltimore, Md. The day's program ended with a chicken dinner, the Association being the guests of the Kellogg Seed Company and the L. Teweles Seed Company of Milwaukee.

On the following morning a short session was held for the election of officers, which resulted as follows: President, W. G. Scarlett of W. G. Scarlett & Co., Baltimore, Md.; vice-president, J. Chas. McCullough of the J. Chas. McCullough Seed Company, Cincinnati, Ohio; secretary-treasurer, C. K. Jones of W. A. Simpson & Co., Baltimore. The Executive Committee was re-elected.

ANNUAL CONVENTION OF EASTERN FEED MEN

About 200 members and guests of the Eastern Federation of Feed Merchants met at Pittsfield, Mass., on June 24 and 25. The report of the secretary, F. C. Jones, showed the membership of the Association to be 950, a favorable showing compared with last year's record of 681.

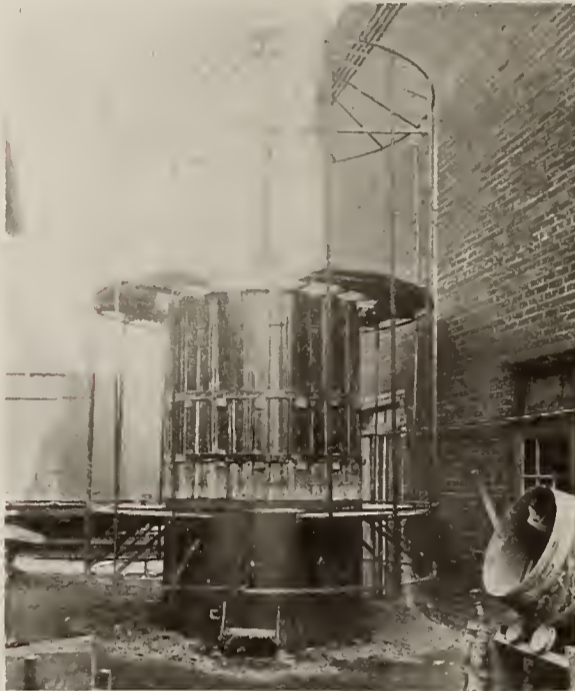
L. F. Brown, secretary of the American Feed Manufacturers Association, Frank A. Coles, W. S. Adams, chief assistant to the vice-president of the Boston & Albany Railroad, Horace Noble, division superintendent of the same road, John F. Lantz, Waverly, William E. Murphy, secretary Horse Association of America gave interesting talks.

The following officers were elected to serve during the ensuing year: President, Reeve Harden, Hamburg, N. J.; vice-president, S. E. Pettitt, Huntington, Long Island; secretary, Frank C.

Jones, Bullville, N. Y.; treasurer, F. T. Benjamin, Canastota, N. Y., Geo. H. Strong, Norwich, N. Y., J. H. Sizer, Hartford, Conn., F. C. Coles, Middletown, Conn., C. P. Adams, Great Barrington, Mass., were elected to serve on the directorate.

NEW MODEL CONCRETE CHIMNEY

A new departure in monolithic concrete chimney construction has been recently developed by the Polk-Genung-Polk Company, Indianapolis and Fort Branch, Ind. In agreement with the popular opinion, that coniform chimneys possess more pleasing architecture than any other, this new construction adopts that design and further ornaments and strengthens the monolith with a series of vertical and integral ribs (half round in section)



STACK IN COURSE OF CONSTRUCTION

and extending from bottom to top and terminating against the eve at the base of the ornamental top.

As in the company's concrete grain storage, water tower and silo machines, the underlying principle of the chimney machine is the steel centermast which carries the entire construction equipment. By virtue of this mast, and the set of radiating steel tees, an unusual accuracy in every line of the chimney is made possible, and



CANVAS PROTECTION AGAINST RAIN

the uniformity of the taper positively made sure. The wall forming shells are sheet steel, framed with small angles, in such a manner that they may overlap as the diameter of the stack decreases.

In each section of outer forms a rib forming corrugation is stamped. For placing re-enforcing these outer forms are readily removed, leaving complete access to the work. The machine carries its own working platforms, the supports of which are elaborated into a steel enclosing cage over which a canvas envelope is stretched for protection from unfavorable weather. There is no scaffolding either inside or outside the chimney at any time, the workmen using the construction ladder which hangs from the machine.

The rate of progress is six feet per day. Recently four men completed a 5x4x100 chimney in 21 days, and this is the most difficult size to build.

On account of the rigidity of the machine and a ruggedness of manufacture, the much desired quaky and efficient, though heavy, concrete mix may be used, and thus a minimum of material required. By numerous other sensible economies the new equipment very greatly reduces the cost of concrete chimneys and at the same time through accuracy of construction and ornamentation, does much to popularize them. The company does not expect to sell or lease any stack building machine, preferring to do chimney contracting themselves.

NORTH DAKOTA LAW UPHELD

On June 21 Judge Charles F. Amidon of the United States District Court, sitting in Fargo, N. D., upheld the Grain Inspection Law which was passed last year. The Farmers Grain Company of Embden, N. D., obtained a temporary injunction restraining the state from enforcing the law until the case had been tried in a Federal court. Judge Amidon dissolved the injunction. In his decision as reported in the *Courier News* of Fargo, the court held:

It is an easy fallacy to say that because grain which is shipped in interstate commerce enjoys as an incident of that shipment exemption from the power of the state into which it is shipped, the same exemption ought to be enjoyed by the purchaser of grain with the intention of transporting it in interstate commerce into another state. This is the capital fallacy of plaintiff's entire argument on this branch of the case. It results, from what I have said, that the State Grain Grading Law has only an indirect and remote effect upon interstate commerce, and plaintiff's first contention is unsound.

We now pass to the second contention: Has Congress, by the United States Grain Standards Act, so fully occupied the field of grain grading, weighing and dockage as to exclude the state from that field, and does



POLK SYSTEM CONCRETE STACK AT ALTAMONT, ILL.

Chapter 138 of the session laws of 1919 come in conflict with this Federal law so as to render it void?

At the hearing before me it has been made plain by the testimony and by careful study and explanation of the laws, that they are not in conflict, but were intended by their authors to be parts of a single system, and they have been so applied by the defendants, Ladd and McGovern.

The state law of North Dakota requires every elevator agent or assistant who is engaged in the work of grading, weighing or dockage of grain, or the buying thereof, to take out a license under the state law, for which a fee of \$10 is charged. That is one of the wise features of the state law. The agent's license makes him the agent of the state only for the purpose of responsibility. As to all other features he is the agent of the elevator company. Under his license he is responsible for observing faithfully the provisions of the state law and the rules promulgated by President Ladd.

This brings us to the most plausible charge of conflict between the state and the nation. The second proviso of section 7 of the United States Grain Standards Act provides as follows:

That no person licensed by the Secretary of Agriculture to inspect or grade grain, or employed by him in carrying out any of the provisions of this act, shall, during the term of such license or employment, be interested financially or otherwise, directly or indirectly, in any grain elevator or warehouse, or in the merchandising of grain, nor shall he be in the employment of any person or corporation owning or operating a grain elevator or warehouse.

It is urged by counsel for the plaintiff that this provision has been squarely violated by President Ladd as State Inspector of Grades, because he has issued to the local agents of all elevator companies licenses. This license, however, has not made them agents of the Federal Government or its licensees, within the meaning of the above proviso. Neither are they licensees of the state for the purpose of inspecting or grading grain. They are, as already explained, licensed solely for the purpose of being accountable to the state.

NEWS LETTERS

LOUISVILLE

A. W. WILLIAMS - CORRESPONDENT

THE general movement of hay, grain and feeds has been light in Louisville for the past few weeks, due in part to car shortage for moving products, and again to high prices curtailing demand. Excellent pasturage is also reducing feeding. Mill-feeds have been in generally light demand, while demand for corn has been coming principally from the millers, resulting in white corn carrying a good premium. Hay movement has been very light, as railroads are not supplying cars for hay, when there is a shortage, and when they don't secure revenue on hay sufficient to justify distribution of short supplies of cars.

Wheat cutting is well toward completion, and movement toward mills is beginning, it being predicted that mills will be able to start operations about July 12 to 15. While the wheat crop is about normal, it is anticipated that Europe will need all surplus stocks, and no cheap wheat is anticipated, although it is predicted that prices may work off somewhat as a result of tight money, high interest, and a tendency to allow the farmer to carry his own wheat.

Jefferson County is producing one of the largest potato crops on record, the acreage being larger and the yield better. Indications are for a record-breaking acreage on the second crop. Corn was late in getting started, but covers a good acreage, and is looking fine.

In a report issued July 3, Ballard & Ballard have the following to say concerning the new crop year:

"At Nashville the 60 members of the Southeastern Millers' Association, with a capacity of 49,575 barrels, decided that a short-time flour contract on the new crop this year is the only safe and sane policy for both miller and merchant. Aside from the acute financial situation, there are other reasons, such as the wild market fluctuations we must expect resulting from the car shortage situation. New wheat has not commenced to move freely, even in Southern Tennessee, though mills in Eastern Tennessee have paid \$2.75 per bushel. Wheat already threshed shows unusually fine quality. Some of the mills have bought new Oklahoma wheat (already in transit) at \$2.75 per bushel at the Memphis gateway. At Louisville we have as yet to buy our first bushel of new crop wheat, and when we do commence buying next week, it will doubtless be at a price of \$2.75, Louisville. Possibly we shall get enough wheat for a daylight run commencing Friday or Saturday of next week."

The funeral services of John Riedling, 79 years old, retired grain dealer, were held last week at his home here. Mr. Riedling was born in Germany. He conducted a grocery in Louisville for some time and then established the Riedling Hay and Grain Company, which is now out of business, his three sons having established as many hay and grain concerns, each operating under his own name, these being Edward M. Riedling, R. D. Riedling and George W. Riedling.

The body of W. J. Wilson, manager for the Lagrange Feed and Grain Company, Lagrange, Ky., a branch house of the Eberts Grain Company of Indiana, was taken to Butler, Ind., for burial. Mr. Wilson had been ill several months before his death. His mother and two grown sons survive him. One son, Herman, will succeed his father in business.

Former Mayor Henry A. Burtt, of Jeffersonville, Ind., is endeavoring to recruit a crew of lawyers to assist farmers in the harvest now being brought in. Four lawyers have already signified their intention to join in order to relieve the labor situation in the wheat fields of southern Indiana. Mr. Burtt is an enthusiast in the matter of grain production, having raised a miniature wheat crop this year on a vacant lot in Jeffersonville.

A. E. Vandegrift, traffic manager of the Louisville Board of Trade, while in Washington recently, presented a petition to the Interstate Commerce Commission asking it to preserve the equalization on grain between the markets of Cairo, Ill., Cincinnati, Evansville, Ind., Henderson, Ky., Memphis, Tenn., St. Louis, New Orleans, Omaha, Kansas City, Nashville and Louisville. The petition was presented in connection with the increase of rates which the railroads of the country have asked. In arguing against hori-

zontal increases, Mr. Vandegrift declared that disturbance of equalizations would cause congestions in the favored markets, delay in the movement of equipment and failure to utilize facilities at other markets, thus resulting in a material loss in the distribution of food products.

The Green Milling Company, with a capital of \$15,000, has been incorporated at Mayfield, Ky., by J. W. Green, J. E. Wilson and R. M. McCain.

The shortage of labor is being keenly felt in the section near Hickman, Ky., where wheat cutting has begun. Fancy prices are being paid for harvesters. The crops in that section promise a fair yield, according to reports.

Lieut. Gov. S. Thurston Ballard, of the Ballard & Ballard Company, Louisville, entertained 150 delegates from Southern ports who came to Louisville to urge that export shippers use their ports instead of shipping north and east, with a luncheon at Ballard's Mills recently.

It is estimated that the wheat crop in Bartholomew County, Indiana, will be about 75 per cent of a full crop this year, and that the average yield per acre will not exceed 12 bushels. From 10 to 25 per cent of the wheat has been damaged by the fly, according to reports.

So difficult is it in Christian County, Kentucky, to obtain labor for the wheat harvest, that farmers are harvesting crops on a fifty-fifty basis with laborers and furnishing them with tools and teams. According to reports from Hopkinsville, some of the farmers are having difficulty in getting help even on that basis.

J. B. Wathen, Jr., miller, formerly a distiller, said in regard to the effect of prohibition on business: "No doubt prohibition has helped some businesses, for 'It's an ill wind,' etc. When people don't spend their money for one thing they will spend it for another. But there also is no doubt that many businesses were hit—not only distillers and retail dealers, but the bottle manufacturing concerns, box makers, cooperage plants, firms engaged in printing labels, hardware, pipe and machinery firms. Our distillery plant is practically worthless."

KANSAS CITY

B. S. BROWN - CORRESPONDENT

MEMBERS of the Kansas City Board of Trade voted recently to modify contract grades of grain, chiefly as a means of preventing congestion after trade in wheat futures gets under way. No. 1 and No. 2 hard wheat were made a valid tender instead of No. 1 only, and No. 3 may be delivered at a discount of 5 cents. The contract grade of corn includes No. 1 and No. 2, with No. 3 acceptable at a discount of 2½ cents. The contract grade of oats is No. 3 white, testing 26 pounds or better, with higher grades at a premium of 1½ cents.

Initial deliveries on July contracts at Kansas City were 119,000 bushels of corn, which was the main factor in the decline in July corn to a discount under September. There was a slump of 8 cents the last day in June when it became known that substantial deliveries were expected the next day. Chicago declined about 4 cents at the same time. This is said to be the first time in over four years that July has been under September.

The interest rate on consignments on grain at Kansas City has been fixed at 7 per cent for July by the Finance Committee of the Board of Trade. This is the same as the June rate.

The first car of 1920 oats was received at Kansas City June 26 by the Murphy Grain Company from Shattuck, Okla. It graded No. 2 mixed and sold to Goffe & Carkener for \$1.12.

In the crop year ending June 30 receipts of wheat at Kansas City established a new high record, despite the fact that there was constant complaint of an inadequate supply of cars. Total arrivals were 92,356,200 bushels, an increase of 38,250,000 bushels over those of the preceding season and more than four times the arrivals of two years ago. The former

high record, 77,750,000 bushels, was made in 1914-15, when Kansas raised its bumper wheat crop of 179,000,000 bushels. In July, August and September, 1919, arrivals amounted to 43,000,000 bushels. The total, beyond doubt, would have been much larger if railroads had had the equipment available to meet the unusually heavy demands of the grain trade in the Southwest. There was a series of car shortages, embargoes and congestions, all of which tended to keep grain back in the country. In view of the actual big receipts, it appears probable that railroad service was not far under normal, the unfavorable showing being due to the fact that the demands were far out of the ordinary.

The year's corn receipts, 11,432,500 bushels, were the smallest since 1908-09, when the total was 9,500,000 bushels. Arrivals the preceding season were nearly 20,000,000 bushels and two years ago over 28,000,000 bushels. Oats receipts were also small, 7,787,700 bushels, compared with 16,606,900 bushels the year before and nearly 18,500,000 bushels two years ago.

Total grain receipts were a little over 119,000,000 bushels, the largest ever reported, and 21,000,000 bushels over 1915-16.

The change in trading hours of the Kansas City Board of Trade, made necessary by the adoption of new time in Chicago has not caused any inconvenience. For several weeks the market has been opening at 8:30 and closing at 12:15. On several occasions the earlier closing has restricted trade in the carlot market when inspections were delayed.

Fred R. Warriek is an applicant for membership in the Kansas City Board of Trade on transfer from I. H. Rich of Swift & Co. This will be the third time Mr. Warriek has been a member of the exchange. When last here he was with the Moore-Lawless Grain Company and for the past year has been with an elevator concern at Sioux City. He will be associated with the Thresher-Fuller Grain Company. The membership cost \$14,500. His first membership in the early days of the market cost \$25.

The season's first car of new wheat was received July 1 by Dilts & Morgan. It graded No. 2 mixed and tested 59 pounds to the bushel and 13 per cent moisture. General appearance was good. It sold at auction to the Hall-Baker Grain Company for \$2.79. The wheat came from Braman, Okla., though it had changed hands at Wichita, Kan., before reaching Kansas City. The first car last season was received June 30 and brought \$2.21 and two years ago the first car sold at \$2.15 on June 27.

There has been practically no trade in new wheat in the "to arrive" market at Kansas City this season. Elevators and shippers have shown little disposition to enter the market on their own account when no hedging or other protective facilities were afforded them. The few bids reported thus far have been for small lots for the account of millers, generally a few cars or a few thousand bushels. A few moderate quantities have been bought for export account, delivered at the Gulf. Bids in June ranged from \$2.58 to \$2.62 for No. 1 hard, red or mixed, the market showing a firmer tendency toward the last of the month.

A committee of bankers from Kansas City recently conferred with a number of Government officials in Washington on the subject of an early resumption of trade in wheat futures. They urged that the market be free from all outside regulation in order that it could fulfill one of its important functions, that of helping stabilize credit. Numerous other branches of the grain trade have indicated the urgent need of a wheat futures market recently. Country grain dealers have been especially anxious for a hedging market.

No important change in transportation conditions was reported at Kansas City or in the Southwest the past month, the general situation continuing serious. The supply of cars is inadequate for the demands of grain shippers, terminals and country loading stations generally, who have big stocks of wheat on hand which they cannot dispose of, and it appears probable that the movement of new wheat will be handicapped in all sections. Nearly all branches of the grain trade have joined with financial interests in asking the Interstate Commerce Commission for relief and an increased supply of cars has been promised numerous times, but no apparent relief has been felt yet. The credit situation is particularly acute as most banks have large amounts of money tied up in wheat loans which cannot be liquidated until cars are provided to move the wheat.

The first relief measure taken by the Interstate Commerce Commission was the ordering of about 20,000 cars to be delivered to western roads from eastern and southern lines. Kansas City and the Southwest were to receive 7,650 cars and the rest were to go to the Northwest. The distribution was regarded as inefficient, as this territory needed the larger number of cars in view of the approaching harvest. The cars were to be delivered in the four weeks ending June 25, but in that time only about 500 had been

received. The rest will be delivered, however, though it may be a matter of several more weeks. It is probable a second allotment of cars will be made to the grain carrying roads.

Secretary J. C. Mohler of the Kansas State Department of Agriculture called a meeting of the different branches of the grain trade recently at Wichita and information presented them showed the situation to be more serious than had been thought. Cars were needed to move 25,000,000 bushels of wheat at once, it was said, and before September transportation would be needed for 65,000,000 bushels. As a result of the meeting a committee was sent to Washington to ask for a priority order affecting grain shipments. The I. C. C. admitted the seriousness of the situation, but did not give much promise of such an order.

In checking up the situation at Kansas City recently it was shown that 6,810 cars were needed to move grain in store here, some of which had been ordered out as far back as February.

The Murray Elevator, which was destroyed by an explosion last September, has been repaired and rebuilt and is in operation again. It is operated by the Federal Grain Company.

MILWAUKEE C. O. SKINROOD - CORRESPONDENT

MILWAUKEE grain men are apparently well pleased with the plans which have been made for the resumption of trading in wheat futures on July 15. Secretary Harry A. Plumb reported for Hugo Stolley, who attended the meetings of the Committee of Sixteen from the eight grain exchanges, that trade would be started in the December option. The action taken coincided largely with the suggestions made by Milwaukee grain men. Reports here indicated that it was expected that December wheat would be started somewhere around \$2.50 a bushel, this being closely in line with the \$2.40 a bushel now being paid at country elevators in the Southwest for winter wheat.

A much larger movement is reported in grain at the Milwaukee market with the measures taken to end the car shortage. In one day offerings were 450 carloads of grain, of which nearly 250 were of corn.

The increased movement in grain is also shown by the receipts here for the first week in July, which consisted of 72 cars of barley, 504 cars of corn, 141 cars of oats, 24 cars of wheat, 29 cars of rye and one car of flax. This makes an aggregate of 771 cars, compared with 721 cars the week before, 359 cars for the corresponding week a year ago and 374 cars for the corresponding week of 1918. These figures show that arrivals are about twice as large as last year and two years ago. They also show that about 60 per cent of the receipts now are corn, and most of the remainder is oats, with just an occasional car of barley, wheat and rye.

Opinions among Milwaukee grain men are that there is still a large amount of unsold grain in the country and that this grain will come out if only the cars can be furnished before the new grain starts to move. Country buyers for Milwaukee grain firms report a general disposition to sell grain, the feeling being that prices are now near the top point, and that declines are inevitable as the new grain comes on the market.

Wisconsin crop conditions are reported highly favorable despite the cold, rainy weather for several days in the first half of July. The outlook for corn, wheat and clover hay ranges from good to excellent, the low temperatures being very favorable for grain just at this stage of growth. Oats have headed and look well, but the straw is short for the most part. Showers have delayed haying in many localities. Corn and wheat were considerably damaged by storms in the southern and western sections of the state, rain, heavy winds and hail being among the obstacles encountered by crops.

Banks are expected to have difficulties in taking care of the grain movement unless there is a sudden accession of cars to move the enormous quantities of grain left in the country, according to Secretary Harry A. Plumb of the Chamber of Commerce. The amount of capital tied up in this grain whose movement is being held back, is exceedingly large. Mr. Plumb states, so that to avoid financial stringency alone, it would be highly desirable to promote prompter grain marketing.

Trading at the Milwaukee Chamber of Commerce has been advanced one hour in line with the daylight saving schedule in Chicago. The hours are 8:30 a. m. to 1:15 p. m. Many of the Milwaukee grain men are now compelled to be "early birds" in the morning, but, in compensation they gain an hour more time in the afternoon. Milwaukee has no daylight saving

regulations, the action of the grain men merely being necessary to bring this market into line with that of Chicago.

The American Feed Manufacturers Association, who recently held their convention in Chicago, gave honors to two well-known Milwaukeeans. Charles A. Krause, president and director of the Charles A. Krause Milling Company, and owner of the largest corn mill in the world, was named vice-president of the Association, and Warren R. Anderson, president of the Packages Publishing Company, was named treasurer.

The newest commission company in Milwaukee is that of W. C. Mitchell Company, successor to Randall, Gee & Mitchell Company. The office is located in 72 Insurance Building. A. J. Maley will be in charge, having made application for membership in the Chamber of Commerce. He has been connected with the old Mitchell company for some 20 years, part of the time traveling in Canadian territory and for the last four years being located at Great Falls, Mont.

George A. Schroeder, genial traffic manager of the Chamber of Commerce for about 12 years, who resigned recently, has left for California, where he will reside permanently. He resigned to take effect July 1. No successor has been chosen as yet, the Chamber of Commerce now considering several candidates for the job.

Grain men of Milwaukee predict that the run of grain here for the new season is likely to be the largest on record. There are several new firms here among the receivers and shippers and all the indications are for an extremely lively season.

The movement of grain and grain products by boat direct to Europe, while still small compared with total trade, amounted in value to more than \$1,400,000 for the first six months of 1920, as compared with \$999,000 for the entire year of 1919. A largely increased movement in the future is confidently looked for, especially in the next two or three years.

The directors of the Chamber of Commerce have decided to place its gratuity funds in the hands of a trust company for administration. This move was made as a result of a suggestion by the bankers who are among the trustees of the fund. The gratuity fund now totals more than \$125,000 and benefits paid as a result of recent deaths of members have been about \$600 each. Any member of the Chamber under 50 who passes the necessary examination can join the gratuity fund.

France will have enough of a wheat crop to take care of its own needs, according to Lawrence S. Payn, representing the Simon-Louis, Freres & Co., of France, who recently visited Milwaukee. "When I left France," he said, "the reports were that France would be independent from all outside sources for wheat. There is a wonderful crop. The wheat was more than two and a half feet high and the harvest was not far off. This will mean that more of your wheat will stay at home and that your cost of living ought to be lowered as a result. As for France, it will mean that the money usually paid for wheat will remain in the country and that the value of the franc will therefore be increased."

The convention of the American Seed Trade Association, recently held in Milwaukee, brought delegates and visitors from all parts of the United States, as well as from Canada, France, Holland and other countries. Great interest was manifested in the meetings of the Association and many of the talks given were of an exceedingly practical and intimate character. Phil Grau, manager of the Milwaukee Association of Commerce, gave a spirited address. The entertainment features of the convention were in charge of a Milwaukee committee composed of W. B. Currie, Fred Kellogg, W. A. Lohr, G. H. Hunkel and Hugo Teweles.

Milwaukee takes rank as the fourth largest market for receipts of corn, considering the arrivals for this season up to date, which do not include the heavy marketing for the last few days. Chicago, St. Louis and Omaha lead in corn receipts, while Milwaukee ranks fourth with almost 10,000,000 bushels. Milwaukee surpasses Minneapolis and Kansas City, according to these figures. Last year Milwaukee stood sixth in the list of cities for corn receipts. This year it has moved up to fourth place, indicating the rapidly growing importance of the local market.

A decision of interest to all the business men of the city, and especially to grain men, is the appointment of a terminal committee of railroad officials and shippers to facilitate the movement of freight to and from Milwaukee. The committee includes members from the Chicago, Milwaukee & St. Paul lines, the Chicago & Northwestern, Soo, Pere Marquette and Grand Trunk Railroads, also members of the Association of Commerce. The main points which are being stressed by the new terminal committee are full loading of cars, to the end that every car

shall be made to give the maximum of service; also to have prompt unloading and loading of cars so that cars will not be detained long by the shipper or the receiver of goods, and otherwise to promote the rapid movement of cars by any other method deemed possible. The committee will meet from time to time to formulate more effective methods.

The Board of Directors of the Milwaukee Chamber of Commerce has fixed a new scale of fees for inspection and supervision of weighing, which is of interest to every shipper to the Milwaukee market, as follows:

Inspection Fees

(Effective July 1, 1920)

For inspecting grain from railroad cars on track and furnishing sample, 75 cents per car; where grade requires moisture test, \$1 per car.

For inspecting grain "in" by sample, in bulk, 75 cents per car; where grade requires moisture test, \$1 per car.

For inspecting grain from elevators into railroad cars by grade or sample, 50 cents per car; where grade requires moisture test, 75 cents per car.

For inspecting grain from elevators into vessels, 40 cents per 1,000 bushels; where grain requires moisture test, 50 cents per 1,000 bushels.

For inspecting grain from wagons or trucks, 25 cents per load.

For inspecting by sample or sampling grain in bags, ½ cent per bag; carloads, each bag inspected while unloading, ¼ cent per bag.

For inspecting grain from elevators into wagons or trucks, 25 cents per load.

For sampling grain and furnishing sample, 25 cents per car; bulkhead cars, for each additional lot, 15 cents.

For sampling grain where no inspector is stationed, 50 cents per car; bulkhead cars, for each additional lot, 25 cents.

For sampling screenings, 50 cents per ear.

For testing grain for moisture, 25 cents per car or lot.

For reinspection, 75 cents per car; where grade requires moisture test, \$1 per car, unless in case of an obvious error in original inspection, when no charge is made.

For inspecting mail samples or any other samples submitted for test, 15 cents per sample; with moisture test, 40 cents per sample.

Weighing Fees

(Effective July 1, 1920)

From railway cars, per carload, \$1.
From elevators to wagons or trucks, 20 cents per load.

From elevators to vessels, 5,000 bushels or over, 10 cents per 1,000 bushels.

From elevators to vessels, less than 5,000 bushels, 20 cents per 1,000 bushels.

From vessels to elevators, 20 cents per 1,000 bushels or part thereof.

For supervision of weighing grain after cleaning, drying or transferring, 35 cents per carload; when in bulk lots, 25 cents per 1,000 bushels or part thereof.

For supervision of weighing of bag lots at elevators, malt houses, etc., or counting bags, 50 per hour for services of assistant weigher.

For supervision of weighing at industries other than elevators, mills, malt houses, etc., where no assistant weigher is stationed, 75 cents per hour for services of assistant weigher.

Supervision at Wagon Scale

For weighing carloads, \$1.45 per car, when not in excess of eight wagon or truck loads to the car, and when in excess of that amount, an additional charge of 10 cents per load small be made.

Grain and malt from other sources than railroad cars, and all other property from whatever source, 20 cents per load.

Weighing of Grain in Sacks

In the weighing of grain in sacks, one pound is allowed to be deducted as the weight of each sack.

The charge for supervision of weighing from elevators to cars ranges from 35 cents to 85 cents per carload, depending upon the cost of performing the service. These charges remain as before, no changes having been made.

Reports show that the Wisconsin spring grain area has been reduced about 4 per cent for this season. Total acreage of these grains in 1920 is 3,196,000, which is a little above the five-year average, however. This indicates that farm production of this state will be up to the average, notwithstanding the scarcity of farm help which has caused general alarm.

There is more oats and barley sowed in Wisconsin than last year, but there is a marked cut in the acreage of spring wheat. Farmers apparently did not like the prospect for lower prices for wheat and refused to seed so much spring wheat. Oats, in fact, is the largest area since 1906. The production of the state in oats is expected to be almost 93,000,000 bushels as compared with only 78,000,000 bushels last year. The condition at 93 per cent is about 1 per cent under the 10-year average, indicating that the increased yield will be due to the larger acreage

The barley area is about 2 per cent larger in Wisconsin than in 1919, despite the prohibition wave over the country. The yield is expected to be nearly 16,000,000 bushels, as compared with about 13,500,000 bushels a year ago. Spring wheat yield is forecast at just under 5,000,000 bushels, which is about 1,000,000 bushels less than last year. Winter wheat is estimated around 1,700,000 bushels, which is a little more than last year. These figures show that Wisconsin has splendid prospects for a huge grain yield this year. The hay crop of the state is put at 5,100,000 tons, which is around an average crop. The clover area is 22 per cent over last year, with condition of 91, which may mean a big crop of seed.

Milwaukee shippers, and especially the grain men, have been keenly interested in the decision at Chicago by Judge Landis preventing the drainage district from using more than 250,000 cubic feet of water a minute. Milwaukee interests pointed out that this matter has been before the War Department for the last 20 years and now finally some decisive action is taken. Milwaukee shipping interests are highly elated by the decision of Judge Landis, as harbor building costing several million dollars is now under way here, and it is felt that this great work will be impaired if Chicago is allowed to greatly reduce the lake level.

The plan of using the Chamber of Commerce for a stock trading center is likely to die, according to Secretary Harry A. Plumb. This trade in securities was large several years ago. Since that time many new issues are in the market locally, and it was felt that stock trade should again be revived in a local exchange. Because of the lukewarm attitude of financial houses for the plan, it may be held in abeyance for some time.

DULUTH

S. J. SCHULTE - CORRESPONDENT

BUSINESS in durum has been active on the Duluth market of late and with urgent demand on the part of two houses for grain to fill shipping contracts the quotation in the No. 1 grade was advanced 16 cents to \$2.93 during the second week of this month. All the durum in the houses, here, approximately 600,000 bushels, is under contract for Eastern shipment in addition to a substantial tonnage bought to arrive.

Hadley Hanson has been appointed manager of Logan & Bryan's wire on the Duluth Board of Trade, taking the handling of that business over from H. S. Newell & Co. who acted as correspondents of the Chicago house after the retirement of the Paine Commission Company. Mr. Hanson had been wire operator for the Paine Commission Company for several years, and he remained with Logan & Bryan after Parker Paine had become a member of that firm. He has made a wide circle of friends in the grain trade here.

Ward A. Brown has joined McCarthy Bros. & Co. as cash buyer and pit man on the Board of Trade.

H. D. Stoker and C. C. Baker have become associated with the Van Dusen-Harrington Company as cash buyers on this market, taking the places of Ward A. Brown and M. G. Wisted. The latter is now recorder in the secretary's office.

G. C. Sullivan has taken over the membership of H. W. Hellier on the Board of Trade. The latter has removed to Minneapolis.

F. M. Crosby of the Washburn-Crosby Company and A. H. Hansen of the Hansen Produce Company, New York, have been elected members of the Duluth Board of Trade. The last named purchased the membership of W. N. Anderson, who is now in Winnipeg. The membership of J. R. Marfield has been transferred to J. R. Stewart of Minneapolis. The Board of Trade membership of John W. Barkell has been transferred to Joseph T. Culhane. Several other changes in the personnel of operators connected with the various houses on this market are foreshadowed.

Cash handlers here have been doing some business in oats during the last 10 days. A lot of 151,000 bushels of oats was received here recently from Minneapolis for eastern shipment. The operation was handled through the Capitol Elevator Company. The spot figure in No. 3 white oats here has broken 14 cents to 96 cents-\$1.

Elevator interests and traders on the Duluth Board of Trade are feeling optimistic just now as a result of the good crop reports being received from over the Northwest. Two Duluth houses with wide interior elevator connections assert that the news they are receiving from over western North Dakota and Montana is the most encouraging in several years. It is hoped that growers in districts that suffered heavily through

a succession of dry seasons will be enabled to get on their feet again. Specialists in the flax market have been especially cheered up. From the early outlook taking soil conditions into consideration, they are counting on handling somewhere near the same tonnages of seed that found their way to this market a few years ago.

Specialists in the rye market have been busy for some time back and under active bidding by exporters at times, quotations have covered a wide range. Bidding in the distant future has, however, fallen off of late, with dealers not disposed to make commitments in view of the possibility of a drop developing in prices as a result of the good crop outlook. The cash market was relatively strong with grain wanted for early shipments. The market in rye here is off around 16 cents from its high points of a month ago. Stocks of rye in the elevators here are now down to under 25,000 bushels, as compared with over 8,000,000 bushels at the opening of navigation.

B. Stockman, H. F. Salyards and E. S. Ferguson represented the Duluth Board of Trade in the conferences of the committees that considered plans for the re-opening of trading in the wheat market held at Chicago last week. They had the full backing of members of the Board here in planning to resume trading provided operations could be properly safeguarded.

In view of the opening of the markets to trading in wheat, the directors of the Board of Trade have fixed the grades and the basis at which spring wheat and durum will be deliverable on future contracts. An effort was made to make the grades as liberal as possible and the lineup as decided upon is considered to be fair all around.

In spring wheat, No. 1 northern is the contract grade. No. 1 dark northern is deliverable at 2c above the contract price; No. 2 dark northern at 2c under the contract price; No. 2 northern at 4c under the contract price; No. 3 dark northern at 5c under the contract price, and No. 3 northern at 7c under the contract price.

In durum wheat, No. 2 amber is the contract grade. On contracts for future delivery, No. 1 durum is deliverable at the contract price. No. 1 amber durum is deliverable at 2c above the contract price; No. 2 durum at 2c under the contract price; No. 3 amber durum at 4c under the contract price, and No. 3 durum at 6c under the contract price.

Mixed wheat deliverable on contracts for future delivery of durum wheat when it contains not less than 80 per cent of the durum class, not more than 10 per cent of the sub-class red durum, and not more than 5 per cent of wheat of other classes than hard red spring. Mixed wheat conforming to those requirements is deliverable as follows: No. 1 mixed at 2c under the contract price, and No. 2 mixed at 4c under the contract price.

The grades under which winter wheat will be deliverable under contracts will be announced shortly. It has been announced that winter wheat will not, however, be deliverable under spring wheat contracts. Operators on this market are sanguine that a substantial tonnage of wheat and other grains will be attracted to the Duluth market from Kansas City and Omaha territory as a result of the readjustment in freight rates by the Interstate Commerce Commission. From correspondence received by the elevator and commission houses from grain handlers in that territory, the trade here is looking forward to an early movement of winter wheat this way promoted largely through the assurance of an abundance of storage space and the intimation that plenty of boat space will be available to move the grain out.

With trading in rye, barley and flax futures in addition to wheat futures being carried on upon this market, a novel pit has been installed on the trading floor. It is elliptical in shape, and is equipped with two pulpits, one for wheat and the other for coarse grains trading. Additional quotation and telegraph operators are being employed. Traders here are looking forward to an active market in all grains during the coming fall months.

As illustrating the possibilities of a direct grain movement for export in the event of the Great Lakes to the ocean deep waterways project being carried through, it may be mentioned that a contract has just been entered into to move 500,000 bushels of barley here from California for transshipment by water to Buffalo. The contracts of the elevator and shipping interests call for July-August delivery. The transaction will be handled by the Consolidated Elevator Company. This will be the first time in the history of the trade at this point that grain has been moved this way from the Pacific Coast for reshipment. The deal was brought about through the impossibility of obtaining guarantees of prompt delivery by water through the Panama Canal and then by Erie Canal to Buffalo.

Specialists in coarse grains and feeds on the Duluth market are preparing for a busy fall and winter season. R. M. White, of the White Grain Company asserted that the demand for feeds on this market is much heavier than a year ago due to a great extent to the new road building contracts being carried through over northern Minnesota in which horses are being

used on a heavy scale. Mr. White is laying plans for heavy shipments of oats to the East this fall. He predicts considerably lower prices for hay as a result of the promise of a much above the average crop over the Northwest.

The last Duluth Board of Trade membership sale was made at \$6,500, that price having been paid by the Hansen Produce Co. of New York. It is said that other export houses desire to pick up memberships on this market and that they are ready to pay the price mentioned when they are offered.

PHILADELPHIA

GEORGE G. GOODFELLOW, Correspondent

ACCORDING to the crop estimate report just issued by the Pennsylvania Department of Agriculture, the condition of wheat in the state is placed at 86 per cent of normal, and it forecasts an average yield of 17.6 bushels per acre, and a total production of 27,534,000 bushels. The condition of rye is 92 per cent of normal and indicates a yield of 17.2 bushels per acre, and a total production of 4,027,000 bushels. The estimated area sown to oats is 1,154,330 acres, or 97 per cent of the area sown last year. The condition of oats is 90 per cent of normal, indicating an average yield of 32.9 bushels per acre, and a total production of 37,977,000 bushels. The area sown to barley is estimated at 89 per cent of last year's area, or 14,346 acres. Condition is 90 per cent of normal, indicating a yield of 26.5 bushels per acre, and a total production of 380,100 bushels.

The grain and feed warehouses of William Kolb at 3047 Chestnut Street were burned several weeks ago. The estimated loss was \$30,000, which was fully covered by insurance.

Jacob B. Pultz, head of the grain brokerage firm of J. B. Pultz & Co., is spending an extended summer vacation at Winston, Conn.

Captain John O. Foering, former chief grain inspector for the Commercial Exchange, and Mrs. Foering, are spending the summer at Ocean City, N. J.

Freeman Hawk, wholesale grain and feed dealer at Allentown, Pa., and a member of the Commercial Exchange, died recently at his home following an operation. Mr. Hawk was born 67 years ago and his first job as a boy was with the Schreiber Milling Company on the Little Lehigh River near Allentown. The business conducted at the time of his death was established 25 years ago.

Henry U. Bean, head of the grain and feed brokerage firm of H. U. Bean & Co., was married in June to Miss Caroline Koch, daughter of Mrs. Catharine Koch, of 4541 Green Street, Germantown. Mr. and Mrs. Bean are spending their honeymoon at Ocean City, N. J., and will make their permanent residence at 2231 West Cumberland Street, Philadelphia.

Philadelphia feed and grain dealers have organized the Grain and Feed Club of Philadelphia for the purpose of promoting a better relationship among local dealers. The first meeting was held at a dinner in the Bourse restaurant, in June, when the following officers were elected: President, F. M. Rosekrans, of Rosekrans-Snyder Company; vice-president, A. F. Gruber, of the E. E. Delp Grain Company; secretary, S. J. Gibby, of the Dougherty-MacHenry Company; and treasurer, J. K. Scattergood, of S. F. Scattergood & Co. Among the members so far enrolled in the new organization are: Shane Bros. & Wilson; M. F. Baringer; C. W. Wagar & Co.; Rosekrans-Snyder Company; Woolman & Co.; E. K. Lemont & Sons; J. D. Walls Company; H. U. Bean & Co.; Quaker City Grain Company; S. H. Young & Co.; E. E. Delp Grain Company; H. H. Koch & Co.; A. M. Stover; C. S. Coleman & Co.; A. J. Emmons & Co.; Dougherty-MacHenry Company; E. L. Rogers & Co.; John F. Boddy; James L. King; J. C. Landes; Harvey Barlow; Jonas F. Eby & Son; John B. Yeager & Co.; Samuel Bell & Sons; E. Dunwoody & Co.; Walton Bros.; Quaker City Flour Mills; Standard Hay & Grain Company; and S. F. Scattergood & Co.

New memberships in the Commercial Exchange have been petitioned for during the past month by the Bartlett Frazier Company, Chicago; Robert Bates, Fourth & Market Streets, Philadelphia; and the Eagle Roller Mills Company, New Ulm, Minn.

The number of cars unloaded during June at the Girard Point Elevators of the P. R. R. were 719 wheat and 44 rye.

According to the monthly report of the statistician of the Commercial Exchange, the stocks of grain in public warehouses in Philadelphia on July 1 were 2,379,593 bushels of wheat, 92,116 corn, and 205,966 oats; compared with 2,198,271 bushels wheat, 50,072 corn, and

151,193 oats on June 1; and 836,525 bushels of wheat, 36,739 corn, and 1,416,208 oats one year ago. Receipts of grain at Philadelphia during June were 1,951,609 bushels of wheat, 195,457 corn, 332,128 oats, 130,879 rye, and 12,829 barley. Exports from this port during the same month were 1,741,392 bushels wheat, and 367,571 rye.

H. L. Routh, member of a large grain importing firm of London, England, was recently a guest on the floor of the Commercial Exchange of William M. Richardson, president of the Philadelphia Export Company.

Hubert J. Horan, chairman of the Flour Committee of the Commercial Exchange, was the representative of the Exchange at the meeting called on July 7 by the General Committee of Grain Exchanges to consider the matter of future trading in wheat.

INDIANAPOLIS

MURRAY E. CRAIN - CORRESPONDENT

THE car shortage, high interest rates and other factors have complicated the grain situation in Indiana, and the trade is unable to agree on any general policy as a result. The decline of the market added to the uncertainty, and movement of grain has been light as a result, no one being willing to buy to any great extent, in view of the possibility of further slumps in prices. Threshing has begun out in the state, and if the cars were available, conditions would be much improved. The rolling stock is hard to get, however, and grain dealers are thus up against a very difficult problem. Those who ordinarily would buy wheat and store it pending the arrival of cars have been informed by their local banks that deals of this kind cannot be financed. Bankers advise dealers to buy only when the grain can be moved at once. Those who would tie up their own money in wheat while awaiting transportation are faced with another bit of red tape. Charles B. Riley, secretary of the Indiana Grain Dealers Association, announced that a dealer who accepts grain on storage account becomes a public utility, and hence subject to the regulations imposed on such corporations, including the reports to the State Tax Board for taxation, among others. Mr. Riley reported, however, that the Public Service Commission will be as liberal as possible with dealers who store for farmers, though certain restrictions imposed by the law must be kept in mind.

The probable advance in freight rates is a factor to be kept in mind, according to well informed grain men. This advance, it is believed, will be around 25 per cent. Secretary Riley reported that "some sellers insist on making sales subject to changes in freight rates that may take place before the shipment is ready, hence dealers should be extremely careful about making contracts for shipment dependent upon transportation not already at hand."

In order to clarify the situation, grain men and millers of Indiana have held a number of local meetings recently. Others will probably be held throughout June in order that opinion may be crystallized and a plan of action mapped out. A meeting was held at Frankfort on July 13; at Kokomo and Muncie on July 14; others are scheduled for Marion and Fort Wayne on the fifteenth; Huntington, the sixteenth and Anderson on the same day. Officers of the Indiana Grain Dealers Association will attend as many as possible in order to encourage free discussion.

The Indiana Grain Dealers Association has continued to show a good gain in membership. The work of the Association has been particularly noteworthy during the recent unsettled condition of the market and the trade has been quick to show its appreciation. Recent additions to the Association are as follows: Yeddo Farmers Grain Company, Yeddo, Ind.; W. D. Springer and the Early & Daniel Company, Indianapolis; People's Grain Company, North Judson; Potter & Sawyer, Benselacr; Smith & Stewart, Waveland; The Nutritia Company, Cincinnati, Ohio.

A grain man again heads the Indianapolis Board of Trade, Edward D. Evans, of the Evans Milling Company, being elected president of the organization at the annual meeting last month. Though grain men constitute a minority in Board membership, they contrive to have one of their number elected president every other year, at least. Mr. Evans succeeds Edward B. Raub as president. Joseph A. Kebler, manager of the local office of R. G. Dun & Company, was made vice-president, and Tom Oddy, who retired from the grain trade after long service with Cooper & Oddy, was re-elected treasurer, an office which he has filled since 1905. At the director's meeting on July 12, W. H. Howard was re-appointed secretary for the twelfth consecutive time. The following 10 directors were elected for four-year terms: Edward E. Raub, E. Clifford Barrett, Linton A. Cox, George H. Evans, John E. McGettigana, Mark H. Miller, William J. Mooney, Charles C. Perry, Frank A. Witt, I. E. Woodard and Otto P. Deluse. The regular ticket was victorious in every instance, except

one. Mr. Deluse was a candidate for directorship on the independent ticket and he was the only successful member. He is with the Lew Hill Grain Company. The officers had no chance to escape responsibility, for they were nominated on both tickets.

New members of the Indianapolis Board of Trade are George F. Off, of the National Elevators, and Lowell S. Hoyt, of Chicago. It is understood that Mr. Hoyt will open an office in Indianapolis in the near future.

Recent visitors to Indianapolis included George W. Ithorn, Rockville; A. B. Cohn, Frankfort; George J. Klemm, of Milton; Elmer Hutchinson, of Arlington, and W. W. Suchow, of Franklin.

Lee Kelley, prominent member of the Indiana grain trade, and manager of the Farmers' Elevator at Raub, Ind., is reported missing. Mr. Kelley left his home on June 29 to attend the Indiana Grain Dealers Association's meeting at Indianapolis, and has not been seen since. Whether he reached Indianapolis is not known. Mrs. Kelley and her four children have left Raub for Frankfort, Ind., and any grain man who can throw any light on the case is requested to advise her there.

NEW YORK

C. K. TRAFTON - CORRESPONDENT

THE president and Board of Managers of the New York Produce Exchange have announced the appointment of the following committees to serve during the ensuing year: Grain: Wm. Riemschneider, chairman, Edward W. Elkins, F. C. Kirchoff, Wm. J. Brainard, Robert G. Brandt; Delivery of Warehouse Grain: Wm. C. Mott, chairman, H. B. Day, C. A. Robinson; Carlot Grain: Harry G. Gere, chairman, Edwin A. Barnes, Jos. A. Abel, Jr., James H. Bowne, Wm. H. Kipp, Jr.; Grain Commission Rules: Frank I. Maguire, chairman, C. Walton Andrus, James H. Bowne, Chas. C. Rubins, Fred H. Teller; Flour: Harry J. Greenbank, chairman, O. H. Montgomery, H. P. Piper, Fred O. Seaver, Nelson S. Munger; Hay and Straw: Wm. H. Clark, chairman, Frank S. Voorhees, George N. Reinhardt, Thomas M. Blake, Chas. C. Ramey; Seeds: Wm. Jacot, chairman, Marshall H. Duryea, Ernst Wehncke, O. W. F. Randolph, Chas. Wimmer; Information and Statistics: L. W. Forbell, chairman, B. H. Wunder, Jerome Lewine, J. R. Wilder, Wm. Knight; Trade and Transportation: O. M. Mitchel, chairman, George Rossen, H. Myers Bogert, Walter Moore, A. C. Field; Steamship Affairs: A. C. Feterolf, chairman, O. M. Mitchel, W. J. Love, John McAuliffe, Jr., R. H. Blake; Canals: E. R. Carhart, chairman, Wm. H. Douglas, Welding Ring, W. B. Cragin, A. C. Field, Wm. C. Mott, Edward T. Cushing, T. H. Story, B. H. Wunder.

E. F. Rosenbaum of the J. Rosenbaum Grain Company of the Chicago Board of Trade, who was among the late June visitors on the New York Produce Exchange, expressed the opinion that all commodities were too high. This opinion was based on the belief that there is too much grain back at interior points which must be liquidated before the new crops begin to move freely. He was sorry to say that transportation was too defective to move all these supplies and there was not sufficient money to pay for it.

The reorganized North American Export Grain Association has been incorporated under the laws of the State of New York, with J. Ward Warner, an ex-president of the New York Produce Exchange, as president, and O. M. Mitchel as vice-president. George W. Blanchard continues as secretary and treasurer, which important positions he has filled for a number of years with extreme satisfaction to his associates and great credit to himself. This organization is making excellent progress, embracing not only a large proportion of leading grain exporting houses in the country, but, in addition, receiving applications for membership from numerous other houses.

Robert Edelstein, who has been identified with the grain trade on the New York Produce Exchange for about six years, announced the organization of a new company early this month under the name of the Transatlantic Brokerage and Export Company, Inc. This company, which is backed by one of the largest elevator houses in the country, will conduct an export business on a commission basis exclusively. They have established connections in all the important grain centers in Europe and will also act as representatives of Argentine exporting houses.

Carl Sommer-Larsen, who joined the exporting department of the old house of Milmine, Bodman & Co. during the winter, returned late in June to his post on the Produce Exchange and was cordially welcomed by his friends and associates. He had been absent for about four months, during which time he visited Denmark, Norway, Sweden, Finland, Germany, and the United Kingdom, and established excellent con-

nections. He found the business outlook much brighter, a more optimistic feeling prevailing generally as people are getting back on their feet. He was pleased to observe signs that labor troubles are subsiding as the working class is becoming more rational and reasonable, showing a tendency to resume work. Europe still needs from us fair supplies of food and fertilizers, and also raw materials, but no manufactured articles. He also stated that there was much dissatisfaction over there with regard to manufactured articles because they did not always come up to contract grade. He thought that they would buy foodstuffs here up to September, when they will begin to use their own crops. He saw signs of a more hopeful feeling with regard to Russia, but unfortunately Russia cannot accomplish much now, as the transportation service is exceedingly bad, owing to the scarcity of cars and engines. Some authorities believe that it will require two or three years more before these defects can be rectified.

Thomas G. Readdy, for many years well known in the local grain market as Produce Exchange representative of large "private wire" houses, latterly for Thomson & McKinnon, commission merchants of the Chicago Board of Trade, has severed that connection and in the future will act in a similar capacity for Stein, Alstrin & Co., also of Chicago.

P. W. Cashman, identified with the grain trade in Toronto for about nine years, and latterly engaged in Thomson & McKinnon's New York office, will act as their representative on the Produce Exchange hereafter.

Edward A. Weed, who recently severed a connection of long standing with the Nye-Jenks Grain Company on the Produce Exchange to join the Grain Export Company, Inc., has been elected to a regular membership, having resigned his associate membership.

George E. Cathcart, who was engaged in the local grain trade several years ago, but is now head of Cathcart & Co., grain merchants of Winnipeg, has been elected to membership in the Produce Exchange.

According to an announcement posted on the Produce Exchange bulletin boards early this month, the firm of Morris & Wilmarth, commission merchants and brokers in grain, stocks, cotton, coffee, etc., has been dissolved by mutual consent.

Watson S. Moore of the W. S. Moore Grain Company, Duluth, is an applicant for membership in the New York Produce Exchange. Edward Weismann, grain exporter, has also applied for admission to membership. Richard F. Bausman, who is once again connected with the New York office of the Washburn-Crosby Company, has applied for readmission to the Produce Exchange. During the war Mr. Bausman was chief of the flour department of the Food Administration Grain Corporation. John Brown, connected with the old grain firm of Parker & Graff, has made application for membership in the Produce Exchange.

Charles E. Treloar, who was elected to membership in the Produce Exchange a few months ago to act as local manager for Stein, Alstrin & Co. of the Chicago Board of Trade, has severed that connection, according to a notice on the Exchange bulletin boards.

RECEIPTS AND SHIPMENTS

Following are the receipts and shipments of grain, etc., at the leading terminal markets in the United States for June:

BALTIMORE—Reported by James B. Hessong, secretary of the Chamber of Commerce.

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	3,067,229	.....	2,215,163	.....
Corn, bus....	226,401	.....	71,366	.....
Oats, bus....	120,589	.....	.....	.....
Rye, bus....	2,745,165	.....	2,694,470	.....
Hay, tons....	2,759	.....	.....	.....
Flour, bbls..	346,252	.....	434,717	.....

CHICAGO—Reported by John R. Mauff, secretary of the Board of Trade:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	1,509,000	856,000	4,073,000	1,040,000
Corn, bus....	8,864,000	8,077,000	2,478,000	2,228,000
Oats, bus....	4,674,000	10,113,000	4,309,000	6,211,000
Barley, bus..	869,000	3,516,000	439,000	2,010,000
Rye, bus....	478,000	165,000	597,000	171,000
Timothy Seed, lbs.	458,000	1,348,000	512,000	780,000
Clover Seed, lbs.	100,000	.....	75,000	94,000
Other Grass Seed, lbs....	1,972,000	528,000	497,000	338,000
Flax S'd, bus.	241,000	98,000	14,000	1,000
Broom Corn, lbs.	278,000	970,000	970,000	1,896,000
Hay, tons....	14,188	29,407	1,423	5,414
Flour, bbls..	811,000	747,000	548,000	501,000

CINCINNATI—Reported by D. J. Schuh, executive secretary of the Cincinnati Grain & Hay Exchange:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	248,400	56,400	153,600	48,000
Corn, bus....	676,800	346,800	332,400	165,600
Oats, bus....	316,000	366,000	74,000	140,000
Barley, bus..	.....	22,100	.....	.....
Rye, bus....	10,800	28,800	10,800	28,800
Ear Corn, bus.	72,800	18,400	.....	.....
Hay, tons....	9,042	10,417	.....	.....
Feed, tons...	930	1,800	.....	.....

July 15, 1920

CLEVELAND—Reported by F. H. Baer, traffic commissioner of the Chamber of Commerce:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	21,629	38,142	12,180	...
Corn, bus....	62,719	34,156	1,130	35,479
Oats, bus....	170,812	257,852	...	144,368
Rye, bus....	...	404	...	570
Hay, tons....	...	2,712	...	303

DULUTH—Reported by Chas. F. MacDonald, secretary of the Board of Trade:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	2,787,106	1,110,915	3,113,864	3,015,689
Oats, bus....	58,891	49,306	28,979	43,772
Barley, bus..	85,880	1,711,298	72,795	1,238,842
Rye, bus....	1,639,605	1,417,404	1,944,791	1,806,083
Flax S'd bus.	620,583	121,100	153,486	222,972
Flour, bbls..	502,450	540,950	653,860	674,425
Flour pro-	...	...	...	...
duced	72,760	112,830	...	...

FORT WILLIAM—Reported by E. A. Ursell, statistician of the Board of Grain Commissioners:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	2,185,156	687,341	3,382,148	3,876,108
Corn, bus....	...	93,028	...	93,053
Oats, bus....	517,945	809,043	397,682	1,956,529
Barley, bus..	91,569	649,258	189,741	1,639,276
Rye, bus....	37,185	15,729	63,326	100,712
Flax S'd bus.	125,688	61,233	26,291	146,070
Mixed Grain,	...	...	...	...
lbs.	722,426	350,940	1,344,805	1,220,359

INDIANAPOLIS—Reported by Wm. Howard, secretary of the Board of Trade:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	104,000	125,000	46,800	1,250
Corn, bus....	2,814,000	2,611,250	844,200	615,000
Oats, bus....	1,278,000	1,220,400	522,000	243,000
Barley, bus..	...	11,250	...	...
Rye, bus....	25,200	11,250	22,400	3,750

KANSAS CITY—Reported by E. D. Bigelow, secretary of the Board of Trade:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	4,430,700	629,100	4,160,700	676,350
Corn, bus....	1,422,500	1,553,750	583,750	861,250
Oats, bus....	289,000	958,800	183,000	772,500
Kaffir, bus..	817,300	94,600	282,700	182,000
Barley, bus..	177,000	69,000	107,900	24,700
Rye, bus....	49,500	30,800	23,100	6,600
Bran, tons...	5,220	2,280	14,780	9,740
Flax S'd bus.	...	2,000	...	...
Hay, tons....	44,784	14,892	15,444	4,032
Flour, bbls..	62,725	45,825	279,500	139,425

MILWAUKEE—Reported by H. A. Plumb, secretary of the Chamber of Commerce:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	225,450	273,360	484,350	229,515
Corn, bus....	2,400,120	663,030	715,080	355,523
Oats, bus....	1,391,780	3,900,840	1,612,872	2,759,897
Barley, bus..	668,975	2,740,080	203,320	1,502,593
Rye, bus....	308,265	225,450	296,240	25,650
Timothy Seed,	...	...	...	...
lbs.	30,000	3,100	275,409	54,500
Clover Seed,	...	...	...	...
lbs. ....	...	76,020	327,140	3,265
Malt, bus....	72,200	163,300	312,009	824,286
Flax S'd bus.	59,450	29,040	...	...
Feed, tons ..	3,450	5,976	24,732	19,496
Hay, tons....	2,229	1,898	786	216
Flour, bbls..	62,550	79,440	73,100	81,060

MINNEAPOLIS—Reported by G. W. Maschke, statistician of the Chamber of Commerce:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	6,053,930	3,932,040	3,873,000	2,982,650
Corn, bus....	847,260	440,160	691,140	326,950
Oats, bus....	709,680	2,183,060	1,935,330	1,532,910
Barley, bus..	758,180	4,608,930	986,150	4,397,940
Rye, bus....	369,200	784,820	2,159,470	573,620
Flax S'd bus.	520,960	942,000	66,840	83,600
Hay, tons....	1,200	1,113	650	159
Flour, bbls..	73,819	103,144	1,532,920	1,261,976

NEW ORLEANS—Reported by George S. Colby, chief grain inspector and weighmaster of the Board of Trade, Ltd.:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	1,597,460	2,612,563	...	...
Corn, bus....	94,040	51,132	...	...
Oats, bus....	32,160	85,270	...	...
Barley, bus..	414,643	647,195	...	...

NEW YORK—Reported by H. Heinzer, statistician of the Produce Exchange:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	2,469,100	...	1,657,000	...
Corn, bus....	1,065,400	...	36,000	...
Oats, bus....	2,034,800	...	1,786,000	...
Barley, bus..	62,900	...	41,000	...
Rye, bus....	3,594,600	...	3,303,000	...
Timothy Seed	...	...	...	...
Clover Seed	...	...	...	...
Other Grass	60 Bags	...	250 Bags	...
Seed .....	...	...	...	...
Flax S'd bus.	1,448,359	...	...	...
Hay, tons....	16,494	...	2,320	...
Flour, bbls..	425,567	...	611,000	...

OMAHA—Reported by F. P. Manchester, secretary of the Grain Exchange:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	1,544,400	291,600	1,755,600	232,800
Corn, bus....	3,324,400	2,255,400	2,560,600	2,497,600
Oats, bus....	900,000	131,600	832,000	176,800
Barley, bus..	28,800	183,600	30,600	174,600
Rye, bus....	71,500	77,000	132,000	14,300

PHILADELPHIA—Reported by S. S. Daniels, statistician of the Commercial Exchange:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	1,951,609	2,592,524	1,741,392	1,548,486
Corn, bus....	195,457	276,938	...	107,775
Oats, bus....	332,128	1,880,787	...	816,465
Barley, bus..	12,829	191,503	...	60,000
Rye, bus....	130,879	1,405,916	367,571	1,395,065
Flour, bbls..	240,320	728,207	115,722	365,544

ST. LOUIS—Reported by Eugene Smith, secretary of the Merchants' Exchange:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	2,497,200	504,477	1,731,020	175,910
Corn, bus....	3,407,300	2,369,750	1,625,460	802,490
Oats, bus....	1,744,000	2,814,000	1,679,580	1,907,650
Barley, bus..	36,800	72,000	1,260	33,930
Rye, bus....	20,900	15,400	10,760	3,395
Hay, tons....	19,524	13,380	7,020	5,010
Flour, bbls..	361,010	165,340	412,690	292,295

PEORIA—Reported by John R. Lofgren, secretary of the Board of Trade:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	115,600	66,000	167,800	56,400
Corn, bus....	2,348,050	2,145,850	1,002,150	1,375,800
Oats, bus....	1,140,400	741,600	1,371,300	777,900
Barley, bus..	72,800	273,000	60,200	187,600
Rye, bus....	158,200	7,200	172,800	16,800
Timothy Seed,	...	...	...	...
lbs.	9,360	8,620	18,960	13,893
Seeds, lbs....	1,500,000	30,000	60,000	30,000
Broom Corn,	...	...	...	...
lbs.	120,000	...	60,000	30,000
Hay, tons....	3,430	3,130	530	430
Flour, bbls..	215,500	199,900	215,800	222,500

TOLEDO—Reported by A. Gassaway, secretary of the Produce Exchange:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	155,400	65,250	216,375	35,790
Corn, bus....	310,000	72,650	102,440	28,050
Oats, bus....	233,700	614,600	35,015	276,960
Barley, bus..	6,000	8,400	...	17,800
Rye, bus....	14,400	24,390	76,725	105,380
Timothy, bags	...	...	1,573	8,927
Clover Seed,	...	...	...	...
bags	395	...	317	170
Alsike, bags.	...	...	15	3

PORTLAND, ME.—Reported by George F. Feeney, traffic manager of the Chamber of Commerce:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, bus..	155,374	2,393,003	391,143	2,889,544
Oats, bus....	566,237	...	90,823	...
Barley, bus..	14,869	73,089	14,869	...
Rye, bus....	514,157	...	897,448	...

SAN FRANCISCO—Reported by H. C. Bunker, chief inspector of the Chamber of Commerce Grain Trade Association:

	Receipts		Shipments	
	1920	1919	1920	1919
Wheat, tons..	2,432	8,627	...	...
Corn, tons...	897	1,956	...	...
Oats, tons...	659	1,165	...	...
Barley, tons.	4,347	27,012	...	...
Bran, tons...	154	267	...	...
Beans, sacks.	23,775	101,518	...	...
Hay, tons....	8,605	5,099	...	...

A THRIVING PLANT IN DAKOTA

When the elevator of T. J. Ryan of Alcester, S. D., burned to the ground in 1918, W. M. Rowley bought the site, and immediately erected a new house of cribbed construction, in the general style of hundreds of others which dot the Dakota landscape. Just why Mr. Ryan sold out remains a mystery, for since the new elevator was erected on the North Western Railroad, Mr. Rowley has handled all the grain the house could take care of and has a very profitable trade in flour, feed and live stock besides.

The house has a capacity of 20,000 bushels, divided about equally between nine bins. The receiving pit has a capacity of 250 bushels and the shipping capacity is six cars per day. There is a Howe Dump Scale and a Howe Automatic Scale and a cleaner of 1,500 bushels per hour capacity.

The power is received from a central electric service station, one General Electric Motor of 7½ horsepower operates the entire house. The house



W. M. ROWLEY ELEVATOR, ALCESTER, S. D.

has fire protectors distributed liberally throughout the building, so that incipient fires can be taken care of wherever they occur.

Not so many years ago Dakota elevators handled wheat almost exclusively, but now the Alcester plant receives corn, oats, wheat and barley, and all of them of excellent quality.

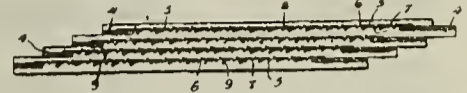
E. J. COX and others have incorporated the Clark-ton Ginn Seed Company of Clarkton, N. C. Its capital stock is \$50,000.

GRAIN TRADE PATENTS

Bearing Date of May 18, 1920

Grain sieve.—Nels G. Ek, Minneapolis, Minn., assignor to Fosston-Carpenter Company, St. Paul, Minn., a corporation of Minnesota. Filed September 29, 1917. No. 1,341,792. See cut.

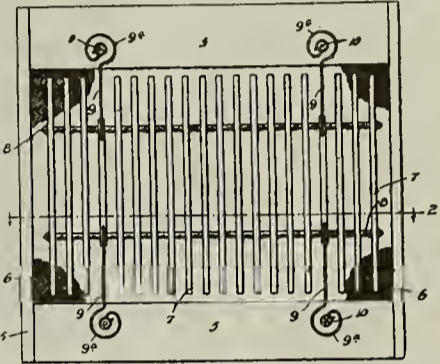
Claim: A sieve of the kind described made up solely of approximately flat bars spaced to form gaps, said bars having upturned lips at their delivery edges and downturned lips at their receiving edges, the said



bars at their undersurfaces having downwardly and forwardly inclined propelling blades adjacent to but at the rear of said gaps, as and for the purposes set forth.

Sieve cleaning device.—Nels G. Ek, Minneapolis, Minn., assignor to Fosston-Carpenter Company, St. Paul, Minn., a corporation of Minnesota. Filed September 29, 1917. No. 1,341,793. See cut.

Claim: The combination with a sieve and means for imparting a "to and fro" vibratory movement thereto, of a cleaning rack comprising a multiplicity of closely positioned parallel bars extended transversely of the direction of vibration of said sieve,



and resilient rack supporting arms connected to said rack at their inner portions and anchored to the sieve structure, the said spring arms being also extended transversely of the direction of vibration of said sieve and serving to hold said rack normally in intermediate positions.

Bearing Date of June 15, 1920

Seed selecting mechanism.—Robert A. Vest, Pon-totoc, Texas. Filed January 19, 1918. No. 1,343,802.

Bearing Date of June 22, 1920

Reducing mill.—Edward B. Campbell, St. Louis, Mo., assignor to Williams Patent Crusher & Pul-verizing Company, St. Louis, Mo., a corporation of



CANADA

The Farnham Grain Company of Farnham, Que., has been registered.

The Alberta Pacific Grain Company of Edmonton, is erecting a grain elevator at Bentley, Alta.

The Imperial Elevator Company has sold 17 elevators to the Leitch-McLean Elevator Company of Winnipeg, Man. This firm has also purchased one elevator from Hallet & Carey.

EASTERN

A plea has been entered by Geo. E. Pierce of Buffalo, N. Y., that he be permitted to reopen the Evans Elevator and conduct it for four or five months with the privilege of rebuying it if he so desires.

The grain warehouse located at Baltimore, Md., which has been occupied by E. Steen & Bro. for some time has been purchased by them. It is said that the Steen firm now operates the largest private granary in Baltimore. It has capacity of 100,000 bushels.

The old Iron City Elevator has been purchased for the consideration of \$90,000 by the Jesse C. Stewart Company of Pittsburgh, Pa., from D. G. Stewart. The elevator has 19 bins of 130,000 bushels' capacity. The firm will conduct a coarse grain business. The business will be under the management of W. A. Low.

INDIANA

The O. Gandy Company is succeeded at Denver, Ind., by the Mayer Grain Company.

Notice of dissolution has been filed by the Anderson & Sons Grain Company of Milton, Ind.

The Flinn Grain Company of Earl Park, Ind., has filed a preliminary certificate of dissolution.

The Prebel Elevator Company of Preble, Ind., has changed its name to that of the Preble Equity Exchange.

The elevator of the Farmers Grain Company at Rensselaer, Ind., is to be remodeled. H. H. Potter is manager.

The Farmers Elevator Company of Mt. Vernon, Ind., has purchased a Trapp Dumping System for installation in its plant.

J. D. Sidener of Hope has sold his elevator at Burney, Ind., to Delgar Moor of Newburg. Possession was given June 1.

An elevator company is being organized at Atlanta, Ind., by the farmers of that vicinity. They will purchase an elevator there.

The elevator of the Dayton Grain Company at Dayton, Ind., has been purchased by J. T. Higgins. He will operate it under his own name.

The charter of the Farmers Grain & Supply Company of Windfall, Ind., has been amended and capital stock increased from \$35,000 to \$50,000.

The charter of the Loughrey Bros. Milling & Grain Company, Monticello, Ind., has been amended increasing capital stock from \$60,000 to \$120,000.

The Newton County Association purchased the elevator of Ed Harris at Mt. Ayr, Ind., for the consideration of \$20,000. Possession was given July 1.

Geo. Cain, Francis J. Snider, A. L. Stone and Chas. K. Stone have incorporated the Milton Grain Company of Milton, Ind. Its capital stock is \$50,000.

A farmers company has been organized at Arcadia, Ind., and has purchased the elevator of Hollett & Winders there for the consideration of \$34,000.

John F. Pinkenton, Paul W. Grieger and Gust Grieger have incorporated at Valparaiso, Ind., as the Farmers Grain & Lumber Company. Its capital stock is \$30,000.

F. L. O'Rear's elevator at Merom, Ind., has been purchased by the Farmers Co-operative Company for \$12,000. Herman Jones is chairman, Jess Daugherty, secretary, and Carter Phegley, treasurer of the firm.

Ira B. Goodwin, A. O. Dulin, H. C. Markland have incorporated the Whitestown Co-operative Grain & Supply Company of Whitestown, Ind. The firm is capitalized at \$50,000 and will handle grain and feed.

The elevator of W. D. Wilson & Co., at Fountain City, Ind., has been purchased by the Farmers National Grain Association. This company succeeds the Buckeye Elevator & Grain Company. The firm

also owns and operates elevators at Boston, Wits and Kitchel, Ind. Its capital stock is \$150,000. E. C. Price is president.

Incorporation papers have been filed at Hemlock, Ind., for the Hemlock Grain & Lumber Company. Its capital stock is \$31,500. The incorporators are: O. S. Duckworth, O. C. Fenn and L. L. Cook.

Improvements are being made to the plant of the Williamsburg Co-operative Association of Williamsburg, Ind. The firm is installing a 35-horsepower engine, auto scale, elevator stand and is making other minor improvements.

The Farmers Co-operative Company has been organized at Cicero, Ind., to handle grain and grain products. E. E. Cornthwaite, D. B. Zimmerman and A. C. Good are interested. The company has purchased the elevator of Castle & Kerr at Cicero. The farmers company will operate their new acquisition in the near future.

THE DAKOTAS

Arthur J. Murphy is to make repairs on his elevator located at Carthage, S. D.

H. B. Freeborn has purchased and will operate a grain elevator at McVile, N. D.

Efforts are being made to organize a farmers elevator company at Manvel, N. D.

The St. Anthony & Dakota Elevator at Easby, N. D., is undergoing numerous repairs.

The Bradley-Robertson Grain Company has purchased the elevator of the Turner Grain Company at Irene, S. D.

Several repairs are being made to the Equity Elevator at Frederick, S. D. The elevator is also being painted.

Improvements costing about \$20,000 are being made to the plant of the Co-operative Grain Company at Chamberlain, S. D.

The elevator of the Hoese & Lueth Grain Company at Farmer, S. D., has been purchased by the Farmers Elevator Company.

Considerable remodeling has been done to the Farmers Union Elevator at Parker, S. D. A new roof has been put on.

The Missionhill, S. D., branch of the Farmers Union has made arrangements for the construction of a modern grain elevator there.

The Minnesota Elevator at Norma, N. D., has been moved a short distance from its old site. A new foundation was put beneath it.

H. A. Riley has purchased the elevator at Milbank, S. D., owned by F. A. Croal. New owner will take possession in the near future.

A new addition is being built to the elevator of the Gettysburg Equity Exchange at Gettysburg, S. D. It is being pushed to completion.

The new 25,000-bushel concrete elevator at Scotland, S. D., of the Farmers Grain & Stock Company has been completed. It is modern in every detail and equipped with up-to-date machinery.

The contract has been let by the Equity Co-operative Exchange for the construction of a modern 40,000-bushel elevator at Bathgate, N. D. In addition to the elevator proper, a coal shed and warehouse will be built.

To deal in grain, farm supplies, etc., the Farmers Union Grain & Livestock Company has been incorporated at Platte, S. D. F. A. Uttech, Martin Strand and R. O. Jacobs are the incorporators. Capital stock amounts to \$100,000.

Globe Combination Auto Truck and Wagon Dumps have been purchased for installation by the following South Dakota firms: Renner Farmers Elevator Company; Renner; John Henning, Lake Andes; Farmers Co-operative Elevator Company, Britton; Farmers Elevator Company, Burch; James Carlson, Geddes; Virgil Equity Union Exchange, Virgil; Aberdeen Farmers Equity Exchange, Aberdeen. The Farmers Elevator Company of Scranton, N. D., has also purchased one.

The following South Dakota firms have purchased Trapp Dumping Systems from the Trapp-Gohr-Donovan Company: Farmers Union Co-operative Company, Emery; Farmers Elevator Company, Wessington Springs; Farmers Elevator Company, Bryant; McVan Elevator Company, Reliance; Brandon Farmers Elevator Company, Brandon. The Ruzicka Elevator Company of Lankin, N. D.,

has purchased a Trapp Dumping System; J. F. Scroggs of Sioux City, Iowa, for elevators at Canova, Beresford, Monroe, Wakonda, Centerville, Alcester, Esmond, S. D., and Sioux City, Iowa.

W. F. Kennedy, C. C. Barnes and C. E. Dobbins are named as the backers of the Farmers Elevator Company recently formed at Okaton, S. D. The capital stock of the firm is \$25,000.

The D. S. Simmons Seed Company of Moorhead, Minn., has purchased the A. A. Robinson Elevator at Minot, N. D. The seed firm will take possession on August 1 and has plans made for increasing the wholesale seed business of the elevator.

The contract has been let for remodeling of the elevator of the old Farmers Land, Loan & Grain Company of Menno, S. D., purchased recently by the South Dakota Grain Company. The firm will also repair its elevators at Freeman and Yale recently purchased from the farmers company.

ILLINOIS

The elevator at Allenville, Ill., has been purchased by Jesse B. Tabor.

The W. C. Davis Elevators at Sullivan, Ill., have been purchased by Rose & McDavid.

The Farmers Grain & Coal Company of Flanagan, Ill., is building a 75,000-bushel concrete elevator.

Electric motors are being installed in the elevators of the Adrian Elevator Company at Adrian, Ill.

The Farmers Co-operative Grain Company of Greenfield, Ill., is building a 25,000-bushel grain elevator.

Four circular tanks of 40,000 bushels' capacity are to be built for the Riverside Mills of Metropolis, Ill.

The elevator at Lakewood, Ill., has been purchased by the new Lakewood Co-operative Exchange.

The Inland Grain Company of Galesburg, Ill., has purchased the granaries of Arthur Graham at Alexis, Ill.

A warehouse is being built at Cuba, Ill., for the Co-operative Grain Company, of which Ira Franklin is manager.

The Farmers Co-operative Company has purchased the elevator and grain business of H. F. Turner at Eden, Ill.

The elevator at Vera, Ill., has been purchased by the Farmers Co-operative Exchange. B. F. Williams is secretary of the exchange.

The capital stock of the Co-operative Grain & Supply Company of Troy Grove, Ill., has been increased from \$20,000 to \$40,000.

The National Elevator at Chicago, Ill., has been leased by the Rosenbaum Bros., grain dealers operating on the Chicago Board of Trade.

J. R. Dilworth, D. B. Carither and H. D. McFadden have incorporated the Farmers Elevator Company of Table Grove, Ill. Its capital stock is \$40,000.

A new 65,000-bushel reinforced concrete elevator is to be built at Pecos, Ill., for Davis, Burton & Gardner. It will consist of eight vertical cylindrical bins, 65 feet high.

The American Grain Company's elevator at Tonica, Ill., has been purchased by G. A. Cope. Its elevator at Argenta has been purchased by the Argenta Grain Company.

The grain elevator, hay plant and grain drying plant of Jas. F. Umpleby at Ohlman, Ill., has been purchased by the Ohlman Co-operative Company. M. L. Virden is retained as manager.

The F. and T. Meyer & Co. elevator at Dorchester, Ill., has been purchased by the Dorchester Co-operative Elevator Association. Everett Cameron will be manager. Possession was given June 1.

The Alpha Grain Company of Alpha, and the Central Grain & Supply Company of Morris, Ill., have purchased for installation Trapp Dumping Systems, made by the Trapp-Gohr-Donovan Company of Omaha, Neb.

Geo. McAdams' elevators at Ursa and Rock Creek, Ill. (no P. O.), have been purchased by G. G. Jones and Philip E. Herr of the Knollenberg Milling Company. Consideration was \$20,000. Possession was given the latter part of June.

Globe Combination Auto Truck and Wagon Dumps have been purchased for installation by the following Illinois firms: Farmers Elevator Com-

July 15, 1920

pany, Thomasborough; Farmers Elevator Company, Reddick; Roberts & Pearson Grain Company, Burgess; Kasebeer Farmers Elevator Company, Kasebeer; Agnew Farmers Elevator Company, Galt; Roberts & Myers Grain Company, Osco.

Capitalized at \$30,000, the Brighton Farmers Co-operative Elevator Company has been incorporated at Brighton, Ill., by Pearly Haycraft, E. J. Morton, C. C. Schmidt, Henry Stamme, Thos. L. Strohbeck, Otto Schneeberg and C. A. Hilliard.

The assets of the Koch Grain Company at Breese, Ill., have been taken over by the recently organized Breese Grain Company. A. C. Koch is president; O. G. Rumpf, secretary-treasurer. The firm will handle grain, seed, flour, feed, hay and fertilizer.

The Tremont Mutual Grain Company of Tremont, Ill., has been reorganized and name changed to that of the Tremont Co-operative Grain Company. The capital stock of the firm has been increased from \$9,000 to \$25,000. E. P. Foley is president; J. P. Becker, vice-president; Louis Getz, secretary and J. E. McIntyre, treasurer.

OHIO AND MICHIGAN

An elevator is to be constructed at Quincy, Mich., for the Quincy Elevator Company.

Roe Pugh's elevator at Bradford, Ohio, has been purchased by W. D. Wilson & Son.

The Greenville, Ohio, elevator of J. W. Mendenhall has been purchased by J. C. Cole & Sons.

The Babcock Bros.' elevator at Ashley, Ohio, has been purchased by the Ashley Co-operative Company.

J. P. Barnhouse & Son's elevator at Larue, Ohio, has been purchased by the Farmers Exchange.

A concrete elevator costing \$20,000 is to be built at Montgomery, Ohio, for the Tri-State Co-operative Association.

The capital stock of the Lodi Mill & Elevator Company of Lodi, Ohio, has been increased from \$125,000 to \$200,000.

The Eaton Farmers Exchange Company has purchased the Musselman Elevator at Eaton, Ohio. W. Schlientz is manager.

The capital stock of the Scioto Grain & Supply Company of Ashville, Ohio, has been increased from \$25,000 to \$50,000.

Money is being raised to finance the erection of a grain elevator at St. Johns, Mich. The farmers are interested in the project.

Farmers around Chagrin Falls, Ohio, are interested in the formation of a company to build an elevator and feed mill there.

The elevator of J. C. Minich at Trotwood, Ohio, has been sold by him to the Farmers Exchange Company. Possession was given July 1.

The Gleaners Association has purchased the property of the Malinta Grain & Supply Company including elevator and warehouse at Malinta, Ohio.

The Linn Products Company has sold its elevator at Okemos, Mich., to the Okemos Elevator Company. The firm will make improvements on its plant.

The Farmers Co-operative Association has purchased the elevator of the Sneath-Cunningham Company at McComb, Ohio. Consideration was \$10,000.

H. Van Buren, C. M. Shellhouse and F. C. Duffield have incorporated as the Wharton Farmers Grain Company at Wharton, Ohio. Its capital stock is \$35,000.

M. M. Buckingham, C. C. Chisnell and G. J. Ball have incorporated the Buckingham Grain & Feed Company to operate at Bellevue, Ohio. Its capital stock is \$10,000.

A corn and wheat cleaner, new corn dump, etc., is to be installed in the plant of the Troy Grain & Supply Company of Troy, Ohio. Other improvements are being made.

The recently incorporated Amanda Farmers Exchange Company of Amanda, Ohio, has purchased Huston & Swope's elevators and warehouses for consideration of \$25,000.

Capitalized at \$200,000 the Montgomery County Co-operative Grain & Feed Company has been organized at Dayton, Ohio. The firm will establish a grain elevator at Dayton.

The Linihan Elevator at Battle Creek, Mich., has been purchased by the Gleaners. It has a capacity of 12,000 bushels. M. E. Newell of Grand Rapids will have charge of its operations.

Capitalized at \$50,000, the Kingston Grain Company has been incorporated at Kingston, Ohio and Kinixinnick. A. W. Jones, H. E. Jones, and several others are interested in the firm.

A feed mill at Toledo, Ohio, has been purchased by the Sheets Elevator Company which has increased its capital stock to \$1,000,000. The general offices of the firm are at 6529 Broadway Ave., S. E., Cleveland. The firm also has purchased and now controls the Gates Elevator Company and the G.

E. Conkey Company, feed manufacturers. The mill at Toledo which it purchased was formerly the property of W. H. Haskell & Co.

The H. N. Talcott & Son lumber and coal yards at Saranac, Mich., have been purchased by the recently organized Clearing House Association. The association will erect an elevator soon.

The Valley Grain Company has been incorporated at New Carlisle, Ohio, capitalized with stock of \$3,000. N. Siefert, A. Kronts, F. E. Funderburg and J. H. Smith are named as incorporators.

The Farmers Grain Company of Atlanta, Ohio, has been chartered with a capital stock of \$80,000. The incorporators are: R. S. Templin, F. A. Brown, H. P. Jenks, W. H. Skinner and W. Campbell.

Farmers around Linworth, Ohio, are interested in the formation of a co-operative elevator company. The company will sell and purchase grain and stock feed. Capital stock will be \$40,000, it is said.

Extensive changes have been made to the elevator of the Boughtonville Farmers Exchange Company of Boughtonville, Ohio. A re-cleaner has been installed with a capacity of 1,000 bushels per hour.

The Long Elevator and Mill at Mechanicsburg, Ohio, has been purchased by the Mechanicsburg Farmers Co-operative Exchange. Possession was given on July 1. J. R. Long will be retained as manager.

The Turnbull Elevator and the Lapeer Mercantile Elevator at Lapeer, Mich., has been purchased by the Commercial Milling Company of Detroit, Mich. Ernest L. Paddison will be in charge of the elevators.

Property at Marion (r. f. d. Forward), Mich., including an elevator, warehouse, ice building, hay and potato warehouse, coal sheds and three acres of land has been purchased by the Gleaners. The consideration was \$14,000.

The plant of the Kingsway Elevator Company at Kingsway (r. f. d. Fremont), Ohio, has been purchased by the Peoples Elevator Company of Fremont, Ohio. The two establishments of the firm will be conducted under one management.

Articles of incorporation were recently filed at Miamisburg, Ohio, by the following: R. J. Groby, F. Randall, C. F. Woods, W. Zech, G. B. Francis, F. H. Smith and H. E. Kennel as the Miamisburg Co-operative Elevator Company. Capital stock \$50,000.

The Willshire Equity Union Exchange Company of Willshire, Ohio, has purchased the elevator properties and business of the Willshire Grain Company at Willshire and Schumm for the consideration of \$60,000. Active control was given the new owners on July 1.

The Michigan elevator interests of the Llewellyn Bean Company and the Armour Packing Company have been purchased by the Gleaners Clearing House Association and the Gleaners' Corporation; possession given on July 1. John W. Loomis of the Scottville Elevator will become manager of the Grand Rapids Terminal Elevator.

IOWA

An elevator is to be built at Des Moines, Iowa, for the Sargent & Ash Milling Company.

A new elevator is to be built at Martinsdale, Iowa, for the Talbott Grain Company.

The elevator located at Wiota, Iowa, has been purchased by the Rothschild Grain Company.

Carson & Plughoff have purchased the grain and coal business of C. M. Redmon at Elliott, Iowa.

Farmers Co-operative Company has purchased the elevator of Walsworth & Johnston at Greenfield, Iowa.

A 24x30 foot scale and office building is to be erected at Grundy Center, Iowa, for the Farmers Elevator Company.

A grain elevator will in all probability be erected at Milton, Iowa, next year by the Talbot Grain Company of Keokuk.

The elevators and lumber yard of the Kunz Grain Company at Radcliffe, Iowa, has been sold to the Radcliffe Grain Company.

The Lenoir-Scott Grain Company has been incorporated at Atlantic, Iowa. The firm will conduct a general grain business. Frank Lenoir and Julian Scott are interested.

The Farmers Co-operative Elevator Company of Luther, Iowa, has been dissolved. The recently incorporated farmers company has taken over its holdings. W. C. Cresswell, D. L. Basset and others are interested. Its capital stock is \$75,000.

The Globe Machinery & Supply Company has sold its Globe Combination Auto Truck and Wagon Dumps to the following Iowa firms for installation: Farmers Co-operative Elevator Company, Newburg; Farmers Elevator Company, Gilman; Hunting Elevator Company, Fostoria, Hartley and Rock Valley; J. F. Escher, Parkersburg; G. W. Edgington, Gilmore City (two dumps); Farmers Co-operative Elevator Company, Stout; M. Young, Winterset; H. L. Moorehead, West Branch; Adams

County Flouring Mills Company, Nodaway; Farmers Elevator Company, Orient; O. Kaeberle, Van Horn and Newhall; Geo. A. French, Storm Lake and Cherokee; Farmers Elevator Company, Eldridge Junction; Farmers Elevator Company, Lester; C. W. Edington, Gilmore City; Farmers Co-operative Company, Newburgh.

Trapp Dumping Systems made by the Trapp-Gohr-Donovan Company of Omaha, Neb., have been purchased by the following Iowa firms and will be installed in their elevators: Farmers Elevator Company, Struble; J. F. Burnight, Westerfield; Wagner Grain Company, Ankeny; Farmers Elevator Company, Thor; Farmers Elevator Company, Ashton. Thos. Thompson, Jewell; Klein Bros. Grain Co., Alton; Lone Rock Exchange, Lone Rock; Lowry & Son, Buckeye; R. L. Staben, Ireton; Farmers Grain Company, Sac City; Cannon Bros., Granville; Farmers Grain Company, Graettinger; Arthur Co-operative Company, Arthur; Farmers Elevator Company, Goldfield; Ashton Elevator Company, Ashton; Farmers Mutual Co-operative Association, Orange City; Quaker Oats Company of Chicago, Ill., has purchased two Trapp Dumps, one to be installed at Stanhope, and one at Armstrong, Iowa.

WESTERN

The Western Trading Company is contemplating the erection of a grain elevator at Texico, N. M.

A 25-horsepower Fairbanks-Morse engine has been installed in the plant of the Molson Union Elevator Company of Molson, Wash.

An elevator at Genesee, Idaho, and 100 flat houses for storing sacked grain have been purchased by the Mark P. Miller Milling Company.

An interest in the Sedro-Woolley Grain Company of Sedro Woolley, Wash., has been purchased by T. Alverson. H. Howell is also interested.

The Thompson Bros. Grain Company of Modesto, Calif., will conduct a branch business at Turlock. C. K. Westlake will be in charge of this branch.

N. Collins, W. E. Turnbow and B. W. Powers have incorporated the Farmers Union Company at Palouse, Wash. The firm will erect a new elevator.

The Flagstaff Milling Company of Flagstaff, Ariz., is contemplating the erection of a 30,000-bushel elevator. It is also building a 60x24-foot warehouse.

Bomberger & Co. of Modesto, Calif., have sold out to the Bomberger Bean & Grain Company, Inc. Their successors will continue handling grain, beans and hay.

The Pellissier Elevator Company at Buffalo, Wyo., is succeeded by the Johnson County Farmers Elevator Association. R. O. Watkins is secretary of the firm.

Windham Elevator Company has been incorporated by Henry Larson, M. M. Maury and J. E. Stewart to operate at Windham, Mont. Capital stock \$30,000.

A newly organized firm has purchased the elevator at Conrad, Mont., formerly owned by the Conrad Mercantile Company. It will operate as the Conrad Grain Company.

A warehouse 19x40 feet and coal bins of from 8 to 10 cars' capacity is to be erected at Sedgewick, Colo., for the Sedgewick Farmers Elevator Company. F. Sieck is manager.

The Colfax Grain & Feed Company recently filed articles of incorporation at Colfax, Wash. C. W. McFarland, and C. W. Atkinson are interested. Capital stock amounts to \$25,000.

After July 1 what was formerly known as the Balfour-Greely Grain Company will operate as the Balfour-Hyde Grain Company with offices at Spokane and Seattle, Wash. The Balfour-Greely firm has dissolved. The new firm will be incorporated.

The Greely-Johnson Grain Company which was recently incorporated has offices in the Peyton Building, Spokane, Ore., and will buy and sell grain. The company has branch offices at Great Falls, Mont., and Seattle, Wash., and has a number of warehouses in the state of Montana.

On July 1 the dissolution of the grain and hay firm of Scott, Magner & Miller at San Francisco, Calif., went into effect. The business was taken over and will be continued by Mr. Scott under the firm name of The A. W. Scott Company. Mr. Magner and Mr. Miller are retiring from active business. The new firm will continue on the same lines as the old corporation with the same executive staff.

The Trapp-Gohr-Donovan Company of Omaha, Neb., has sold its Trapp Dumping Systems to the following: Farmers Grain & Milling Company, Hazelton, Idaho; Wray Equity Union Exchange Company, Wray, Colo.; Farmers Platte Valley Milling & Elevator Company, Fort Huron, Colo.; Hugh Baker, Burlington, Colo.; Shell Mill & Grain Company has purchased two Trapp Dumps for elevators at Stratton and Vena, Colo.

The following firms have purchased for installation Globe Combination Auto Truck and Wagon Dumps: Weiser Mill & Elevator Company, Weiser, Idaho; Caldwell (Idaho) Flour Mills Company; Glasser Construction Company, Spokane, Wash.;

Occident Elevator Company, Glendive, Mont.; Sterling Lumber & Investment Company, Denver, Colo.; Proctor (Colo.) Lumber & Supply Company; Burlington (Colo.) Equity Exchange; Stratton (Colo.) Equity Exchange; Wilder (Idaho) Equity Association, Ltd.

The Fischer Warehouse Company has been incorporated at Corvallis, Ore., capitalized at \$50,000. The firm will conduct a milling and storage plant, and will also conduct a merchandising and farming business. August Wm., Louis Henry and Ernest Dedrich Fischer are the incorporators.

A. J. Hole has been appointed as superintendent of a string of elevators owned by the Treasure Grain Company. He will have charge of six elevators with headquarters at Red Lodge, Mont. Mr. Hole has for the past nine years been manager of the Poplar, Mont., elevator of the Montana-Dakota Grain Company.

The Portland Flouring Mills Company has purchased the elevators at Tallman and Tangent, Ore., and the property of the Albany Mill & Elevator Company. The properties have been owned for several months by Major R. R. Knox. The mill will not be used for milling but will be combined with the elevators.

MINNESOTA AND WISCONSIN

A new elevator is to be constructed at Amboy, Minn., for the Amboy Grain Company.

The Rippe Elevators at Fairmont, Minn., have been purchased by the Farmers Elevator Company.

Improvements are being made to the elevator of the Farmers Co-operative Company at Simpson, Minn.

A coal shed has been built to the establishment of the Duluth Elevator Company at Hendrum, Minn.

The elevator capacity of the Sbane Bros. & Wilson Company at Shakopee, Minn., has been increased.

Another grain elevator is to be constructed at Welcome, Minn., in the near future, if present plans materialize.

The Farmers Elevator Company of Westbrook, Minn., recently incorporated. Its capital stock was increased to \$60,000.

The Racine Farmers Elevator Company was organized at Racine, Minn. The firm will either buy or build new elevator.

Fred Fletcher and Mr. Walter have purchased an elevator at Easton, Minn., and will operate it during the coming season.

A Trapp Damping System is to be installed in the elevator of the Beaver Creek Farmers Elevator Company, Beaver Creek, Minn.

Capitalized at \$75,000, an elevator company has been formed at Porter, Minn., to be known as the Porter Co-operative Elevator Company.

The elevator at Prior Lake, Minn., is to be equipped with a new six-ton wagon dump scale, during the time the elevator is shut down for repairs.

The grain elevator and coal business of the R. E. Jones Company at Wabasha, Minn., has been sold to the Farmers Elevator Company of Zumbro Falls.

To conduct a grain elevator and cheese factory the Apple Creek Co-operative Society has been incorporated at Appleton, Wis. Its capital stock is \$10,000.

The elevator at Princeton, Minn., has been closed down and will remain so until the new crop begins to move. Repairs are to be made at the plant during this time.

The contract has been let by the Ceylon Farmers Elevator Company of Ceylon, Minn., for the erection of an addition to its elevator. The addition will be 60,000 bushels in capacity.

The contract has been awarded by Nelson & Peterson for an addition to their warehouse at Duluth, Minn. The company handles grain and feed. The addition will cost \$15,000.

Milan Farmers & Merchants Elevator Company has been organized at Milan, Minn., by A. Anderson, O. R. Grapp and T. Anderson. Capital stock is \$10,000.

Globe Combination Auto Truck and Wagon Dump have been purchased and will be installed by the following Minnesota concerns: Farmers Co-operative Mutual Association, East Grand Forks; Rustad & Nelson, Kerkhoven; Ceylon Farmers Elevator Company, Ceylon.

The Farmers Co-operative Marketing Association of East Grand Forks, Minn., has decided to rebuild its elevator which was recently destroyed by fire. The elevator will have a capacity of 40,000 bushels and will cost about \$30,000. The contract has been let. A Fairbanks Self-registering Beam Scale will be included in the equipment.

P. O. Stram, R. B. Keys, G. M. Stapleton, Z. T. J. Bash and Louis J. Moreau have incorporated Stram & Keys, Inc., of Green Bay, Wis. The capital stock of the firm is \$100,000. The company will conduct a grain, seed, feed, retail produce business.

It will establish its main offices and warehouse at Green Bay with branches in several towns in northern central and northeastern Wisconsin.

Wrabek & Co., have retired from the elevator business at New Prague, Minn., after having been 30 years in the grain business. Their elevator is operated for the time being by the New Prague Flouring Mill.

The Peavey Company was recently incorporated at Minneapolis, Minn., to conduct a grain elevator business. H. G. Dickey, C. F. Deaver and C. W. Lane are the incorporators. Its capital stock is \$100,000.

Articles of incorporation have been filed at Granada, Minn., as the Granada Farmers Elevator Company, capitalized at \$25,000. C. L. Bondry, W. J. Grand, Harold W. Wood and W. E. Teskey are interested.

Plans are under way for the organization of a mutual elevator company at Faribault, Minn., during the summer. When the organization has been completed a new grain elevator will be erected and put into operation.

The Finkel Farmers Elevator Company has been incorporated at Finkle (mail to Moorehead), Minn. Its capital stock is \$25,000. L. Altenbernd is president; A. Lallier, vice-president, and Peter Westling, secretary-treasurer of the firm.

The Bear Creek Co-operative Company of Bear Creek, Wis., has been reorganized into the Bear Creek Mercantile Company. It will enlarge its grain, feed, seed and flour business as well as its merchandise business. Its capital stock is \$40,000.

The Slayton Farmers Co-operative Elevator Association of Slayton, Minn., has amended its articles of incorporation changing its name to that of the Slayton Farmers Grain & Lumber Company. Capital stock is \$100,000. T. W. Brewster is vice-president; H. C. Reed, secretary-treasurer.

MISSOURI, KANSAS AND NEBRASKA

Chas. Graham has purchased the elevator of Wm. Bruce at Smithfield, Neb.

H. F. Braly of Kingman has purchased the elevator of J. R. Blaha at Basil, Kan.

The Kochler Elevator at Blue Hill, Neb., has been taken over by the Farmers Union.

A galvanized wareroom 32x40 feet is to be built at Altamont, Kan., for the Farmers Elevator.

The Farmers Elevator Company has completed its new 30,000-bushel elevator at Tarnov, Neb.

Repairs are being made to the elevator of the Farmers Grain & Supply Company at Farwell, Neb.

Capitalized at \$20,000, the Farmers Milling & Grain Company was incorporated at Schell City, Mo.

A new brick office building is to be built to the elevator of the Farmers Union at Red Cloud, Neb.

The Farmers Co-operative Elevator Company of McKittrick, Mo., is building an 8,000-bushel elevator.

A grain elevator of 25,000 bushels' capacity is to be erected at Talmage, Neb., for the Farmers Union.

R. A. Heacock Company of Falls City, Neb., has purchased the Farmers Elevator located at Shubert, Neb.

Capitalized at \$40,000, the Fayette Co-operative Elevator Association has been incorporated at Fayette, Mo.

The Farmers Union Elevator has purchased an old school building at Dennis, Kan., and will build a wareroom.

Half interest in the Eolia Elevator Company, located at Eolia, Mo., has been purchased by W. A. Magruder.

The contract has been let by Mr. Norris of Burdett, Kan., for the erection of a grain elevator at Grayling, Kan.

M. P. Hannon and others have incorporated the Grange Elevator Company at Lincoln, Neb. Its capital stock is \$25,000.

Emil Thelen has purchased the elevator at Wood River, Neb., and will operate it under the name of the Thelen Grain Company.

The following firms have purchased Globe Combination Auto Truck and Wagon Dumps for installation in their plants: Osborne Farmers Union Co-operative Association of Osborne, Kan., for its Bloomington, Portis, Forney, Alton and Corinth, Kan., plants; Red Star Mill & Elevator Company, Wichita, Kan.; Logan Union Co-operative Company, Logan, Kan.; Security Elevator Company, Elkhart, Kan.; Kimball Mill & Elevator Company, Kimball, Neb.; Farmers Elevator Company, Wellsford, Kan.; Hill & Beaver, Colby, Kan.; Federal Engineering Company will install at Halford, Kan.; Bucklin (Kan.) Co-operative Exchange; Co-operative Association, No. 1, Slater, Mo.; W. P. Kleisen, Hugoton, Kan.; Farmers Union Mercantile & Shipping Association, Stockton, Kan.; Wilsey Grain Company, Winnebago, Neb.; Birchard Construction

Company of Lincoln, Neb., placed order for five dumps which they expect to install in their elevator work.

A two story concrete and stucco office building is to be built at Larned, Kan., for the Pawnee County Grain & Supply Company.

An elevator is to be built at Zarah, Kan., for the Zarah Co-operative Company. Adam Renner is president of the firm.

The elevator at Brunswick, Mo., which has been operated by White & Owen, has been sold by them to a farmers organization.

The business of the Star City Grain & Lumber Company of Princeton and Homewood, Kan., has been sold by them for \$20,000.

The elevator of the Ragan Grain Company at Boyle, Kan., has been purchased by the Douglass Grain Company of Nortonville.

Capitalized at \$10,000, the Doster Co-operative Grain & Fuel Company has been incorporated at Doster (r. f. d. Caldwell), Kan.

The capital stock of the Farmers Co-operative Elevator Company of Jasper, Mo., has been increased from \$15,000 to \$25,000.

The recently incorporated Farmers Elevator Company of Memphis, Mo., has purchased the elevator there from A. G. Craig.

T. L. Trowbridge of Wilcox, Neb., is to build a new hollow tile elevator there this summer and have it ready for operation this fall.

The Oxford Farmers Exchange has purchased the elevator at Arapahoe, Neb., formerly the property of the Wilsey Grain Company.

The Associated Mill & Elevator Company of Kansas City, Mo., has purchased the elevator of C. W. Kershner at Westphalia, Kan.

A modern elevator is to be erected at Nelson, Neb., for the Jensen Milling Company. The firm is also improving and enlarging its mill.

A new 25,000-bushel elevator is being built at Cushing, Neb., for the T. B. Hord Grain Company. The elevator will consist of three tanks.

D. Cox of Downs has purchased the Baker-Crowell Elevator at Gaylord, Kan. J. M. Farrell will probably be retained as manager.

The elevator at Thayer, Kan., formerly owned by the Updike Grain Company is now the property of the Octavia Lumber & Grain Company.

A 17,000-bushel elevator is to be erected at Stockton, Kan., for J. C. Edwards and A. C. Hammond. They have purchased a site for it.

The elevator and feed mill at Elk City, Kan., owned by the C. R. Long Grain Company, has been purchased by W. A. Willson.

The Blair Elevator Company is succeeded at Atchinson, Kan., by the Blair Elevator Corporation, the capital stock of which is \$750,000.

W. T. Barstow Grain Company's elevator at Arcadia, Neb., has been leased by the Farmers Grain & Supply Company. Possession is to be given July 1.

The contract has been let by the Farmers Exchange of Denton County for the erection of a new elevator of 12,000 bushels' capacity at Warsaw, Mo.

Incorporation papers were recently filed by the Pretty Prairie Co-operative Grain Company of Pretty Prairie, Kan. The firm is capitalized at \$50,000.

The A. J. Elevator Company of St. Joseph, Mo., has let the contract to remodel its Platte City, Mo., elevator. The capacity will be increased to 75,000 bushels.

An addition is being built to the elevator of the Blaker Lumber & Grain Company at Mound City, Kan. New machinery including a new engine is to be installed.

The Phillips Grain Company's elevator at Smyrna (Superior p. o.), Neb., is being operated by the Elliott & Meyers Company. The Phillips company is out of business.

Chas. H. Nelson, J. H. Sherer and Mark Wilson are named as incorporators of the Harvard Farmers Union Elevator Company of Harvard, Neb. Capital stock amounts to \$25,000.

The Good Milling & Elevator Company has been purchased by the Farmers Grain & Supply Company of Dannebrog. The elevator is located at Midway (St. Paul p. o.), Neb.

The following Kansas firms have purchased Trapp Dumping Systems: Light Grain & Milling Company, Liberal; L. P. Schrader, Clay Center; P. A. Johnston, Protection; Wallingford Bros., Ashland; Mitchell County Farmers Union Co-operative Association, Beloit; D. O. Chessmore & Co., Atwood; Herrington Union Co-operative Company, Herrington; Farmers Co-operative Elevator Company, Quimmiter; Equity Exchange Association, Liberal; J. W. Pinkerton, Clay Center; H. W. Skinner, Medicine Lodge; A. H. Ling Mill & Elevator Company, Jetmore; W. H. Staples & Co., Beardsley; Wilmore Grain & Mercantile Company, Wilmore; B. W. Kyner, Wilson; Garfield Co-operative Com-

pany, Garfield; Halstead Milling & Elevator Company, Halstead, has purchased two Trapp Dumps for elevators at Burton; Collingwood Bros. of Plains have purchased three Trapp Dumps.

A reinforced concrete elevator of 70,000 bushels' capacity, costing \$20,000, is to be erected at Girard, Kan., for the Girard Mill & Elevator Company. It will be 110 feet high, 40x40 feet.

The Clearwater, Kan., establishment of the Arkansas City (Kan.) Milling Company has been sold to the Farmers Elevator & Supply Company. Its capacity will be 9,000 bushels.

D. H. Hensley, A. A. May, C. W. Fuhr and C. S. Cohall have filed articles of incorporation at Buell, Mo., as the Farmers Elevator & Supply Company. The firm is capitalized at \$10,000.

Articles of incorporation have been filed by J. A. Shields, G. W. Kime, O. D. Gillespie and J. B. Owen as the Willard (Mo.) Grain, Milling, Mercantile & Produce Company. Its capital stock is \$18,330.

The Dewese Farmers Union Elevator Company is a new firm recently incorporated at Dewese, Neb. Its capital stock is \$25,000. John Wandron, J. H. Bell and Cecil Sheets are named as incorporators.

To deal in grain and feed, the Moselle Milling Company has been incorporated at Moselle, Mo. Jacob Gaasch is president; F. J. Hanker, vice-president and John Goodbourne, general manager of the firm.

The Wright-Wilson Grain Company has opened for business at Salina, Kan. The firm is composed of W. W. Wright of the E. L. Rickel Grain Company and H. M. Wilson of the Western Star Milling Company.

A hay and seed department has been opened at St. Joseph, Mo., by the Kellogg-Huff Grain Company. The new department was put into operation July 1, with H. E. Herries in charge. Offices are at 1917 Corby-Forsee Building.

Articles of incorporation have been filed by the Farmers Elevator Company of Alma, Mo., capitalized at \$30,000. The incorporators are: E. J. Knipmeyer, James Jackson, Jr., W. Goodwin and Abraham Von Metin and others.

A frame ironclad elevator of 12,000 bushels' capacity is to be erected at Herndon, Kan., for the Farmers Co-operative Association. The equipment will include a Eureka Cleaner, automatic scale, Fairbanks Engine, wagon scale, manlift and truck dump.

Negotiations were recently concluded whereby George Hausmann of Washington, Mo., becomes the owner of the elevator at Bonnois Mill, Mo., formerly owned by Alex Verdor & Co. Mr. Hausmann will install a dump scale to facilitate the handling of grain.

B. E. Telchbraber of Emporia, Kan., has purchased the interest of J. W. Stratton in the elevator and feed business conducted by Mr. Stratton and J. W. O'Connor at Hartford, Kan. Mr. O'Connor and Mr. Telchbraber will now operate the establishment.

A rectangular concrete headhouse 125 feet high is being erected at Schuyler, Neb., for the Wells-Abbott-Nieman Company. Its loading capacity will be six cars per hour. Its storage capacity will be 50,000 bushels. The firm will also build six cylindrical tanks.

The Walters Grain Company of Riley, Kan., has let the contract for a 10,000-bushel elevator, frame and ironclad. A Globe Dump, 1,200-bushel scale, 10-ton Fairbanks Wagon Scale, manlift and 12,000-bushel leg is to be installed. The elevator will be operated by electricity.

An addition is to be built to the plant of the Holland-O'Neal Milling Company of Springfield, Mo. The addition will be fireproof of concrete construction reinforced with steel. There will be four bins to store corn and four in which to temper wheat. A laboratory will also be provided for.

On July 1 the new elevator of the Lodge Pole Lumber & Grain Company of Lodge Pole, Neb., was completed. The equipment includes a 25-horsepower Type "Y" Fairbanks Oil Engine; 1,000-bushel grain cleaner; one stand elevator with elevating capacity of 2,500 bushels per hour, car puller, auto truck dump.

The following elevator companies located in Nebraska have purchased Trapp Dumping Systems to be installed in their plants: O. O. Cooper Company, Humboldt; O. M. Kellogg Grain Company, Oxford; Central Granaries Company, Hemingford; H. E. Powers, Grafton; Wallace Equity Exchange, Wallace; High Line Grain Company, Wallace; Walrath-Sherwood Lumber Company, Leigh.

The Updike Grain Company of Omaha, Neb., has decided upon a new policy for operating its grain business whereby it will concentrate on terminal elevator and cash consignments. Following out this new plan it has offered for sale its country elevators numbering about 10 in Nebraska and four in Iowa. The capacities of the plants range from 12,000 to 90,000 bushels. The firm owns ter-

minal elevators at Milwaukee, Wis. and Council Bluffs, Iowa. It has a branch office and wire service at Sioux City.

SOUTHERN AND SOUTHWESTERN

A grain elevator is to be built at Texline, Texas, by the Sedan-Texline Equity Union Exchange.

The Ewing Elevator at Shattuck, Okla., has been purchased by the co-operative association there.

A new warehouse is to be erected at Birmingham, Ala., for the Tennessee Mill & Feed Company.

The new 30,000-bushel elevator of the Allison Grain Company at Crowell, Texas, has been completed.

R. H. Pierson Grain & Coal Company is succeeded at Woodward, Okla., by the Pierson-Johnson Grain Company.

The El Reno Mill & Elevator Company of Waukomis, Okla., has sold out to the Waukomis Co-operative Elevator Company.

The grain elevator of the J. Gottlieb Grain Company at Taylor, Texas, which burned with a loss of \$26,000 is to be rebuilt.

The capital stock of the Tahlequah Mill & Elevator Company of Tahlequah, Okla., has been increased from \$15,000 to \$20,000.

The capital stock of the grain firm, Hardeman-King Company at Oklahoma City, Okla., has been increased from \$100,000 to \$150,000.

Henry S. Sawrie has organized the Henry S. Sawrie Company of Nashville, Tenn. The firm will handle coarse grains, feed, flour, etc.

J. C. Alfred and others have incorporated at Pascagoula, Miss., as the Alfred Grocery & Grain Company. Its capital stock is \$20,000.

A modern elevator of 15,000 bushels' capacity is being built at Kaffir Switch, Texas, for the W. C. Gowan Grain Company of Tulia, Texas.

The Spencer Construction Company has the contract for a one-story 75x40 foot storage house and grain elevator for T. H. Maddux of Marshall, Va.

J. G. Evans has sold one of the elevators at Canyon, Texas, which he purchased not long ago from P. J. Neff to the Farmers Grain & Elevator Company.

The contract has been awarded for the Madill Grain & Elevator Company of Madill, Okla., for the erection of additional tanks of 50,000 bushels' capacity.

The elevator of the Edgar, Morgan Company at Memphis, Tenn., is to be rebuilt. The old elevator of the firm was recently burned with a loss of \$150,000.

Capitalized at \$20,000, the White Grain Company has been incorporated at Oklahoma City, Okla. Karland and Esther White and A. L. Peaks are the incorporators.

Frank L. Gresham and P. I. Jacobson have filed articles of incorporation at Oklahoma City, Okla., as the Oklahoma Terminal Elevator Company. Its capital is \$750,000.

The grain elevator at Collinsville, Okla., has been purchased by the Tulsa County Farmers Association. The firm also owns elevators at Broken Arrow, Bixby and Owasso.

To build and operate elevators, mills, etc., Weatherford, Crump & Co., have incorporated at Houston, Texas, capitalized at \$3,000,000. W. Weatherford, A. B. Slack and R. E. Goree are interested in the firm.

The Rice Growers Warehouse & Elevator Association of Lonoke, Ark., is building a 125,000-bushel rice elevator and warehouse with capacity of 100,000 bags. They have bought through representative C. L. Hogle an Invincible Grain Drier for

drying rice from the Invincible Grain Cleaner Company of Silver Creek, N. Y.

A new 50,000-bushel ironclad elevator is being built at Greenville, Texas, for the Stark Grain & Elevator Company. The elevator will be driven by electricity.

A 45,000-bushel grain elevator is to be erected at Farmville, Va., for the Farmville Mills, of which J. W. Bliss is president. The Spencer Construction Company has the contract.

Capitalized at \$24,000, the Farmers Grain & Elevator Company has been incorporated at Haney, Texas. The incorporators were: J. R. Francy, C. R. Strong and J. R. Raymond.

Six additional grain elevators are to be erected at Charlotte, N. C., by the Interstate Milling Company costing \$15,000. The firm will construct 54x34 foot rectangular walls around the elevators.

A 10,000-bushel elevator is to be built at Follett, Texas, for the Teter Grain Company. A modern automatic scale, manlift, Fairbanks Engine and wagon scales are included in the equipment.

A grain elevator may be erected at Brinkman, Okla., by the farmers of that community, who are organizing a company for that purpose. The elevator will be conducted on a co-operative basis.

The Columbia Grain & Provision Company and the Adluh Milling Company have consolidated and will operate at Columbia, S. C., as the Adluh Milling Company. The capital stock of the firm will be increased to \$150,000.

Articles of incorporation have been filed for the Amber Grange Elevator Company of Amber, Okla. Its capital stock is \$20,000. J. W. Webb, F. W. Ayers and T. M. McElroy are interested. The firm has purchased the elevator of the Wheatland Grain & Lumber Company at Amber.

To conduct a wholesale and retail grain, feed and food products business Crosswell, Inc., of Greenville, S. C., have incorporated. Its capital stock is \$100,000. H. M. Crosswell is president; Grover Crosswell, secretary; W. J. Crosswell vice-president and J. E. Crosswell, treasurer of the firm.

A. E. Smith has sold the Owasso Grain Company's elevator at Owasso, Okla., to the Tulsa County Farmers Co-operative Company. The farmers company has also leased the Hampton Bros. Grain Company's elevator from B. E. Boes. Two houses will be operated under the management of B. E. Boes.

Trapp Dumping Systems have been purchased and will be installed by the following firms: Farmers Grain & Elevator Company, Salt Fork, Okla.; Tonkawa Shippers Association, Tonkawa, Okla.; Wheeler Grain Company, Bessie, Okla.; J. Milton Erwin, Byers, Texas; Forgan Equity Exchange, Forgan, Okla.; Farmers Co-operative Elevator, Mangum, Okla.; Farmers Co-operative Elevator Company, Granite, Okla.; Hogan Grain Company, Reeding, Okla.; Farmers Elevator Company, Iowa Park, Texas; W. H. Timmis, Buffalo, Okla.; Farmers Elevator Company, Kremlin, Okla.; A. D. Young, Nowata, Okla.; Farmers Grain & Supply Company, Thomas, Okla.; W. H. Francis, Mountain View, Okla.; J. R. Thomas, Carnegie, Okla.; W. R. Andrews, New Castle, Texas; Jim Cobb, Tipton, Okla.; Will Kemp, Frederick, Okla.; John Bishop, Petrolia, Texas; R. C. Ayers Grain Company, Plainview, Texas; Bolin-Hall Grain Company, Perryton, Texas; Fred Varner of Grandfield, Okla., has purchased two Trapp dumps; L. S. Fisher, Selman, Okla., purchased two Trapp dumps; Liske Grain Company bought three Trapp dumps for elevators at Perryton, Booker and White Deer, Texas; Huffine & Co., Frederick, Okla.; Heller-Stadler Grain Company for elevators at Cashion, Navina and Lockridge, Okla.

OBITUARY

BRUCE.—John A. Bruce of J. A. Bruce & Co., seedsmen, Hamilton, Ont., died recently after a lengthy illness. In 1875 he formed the company of J. A. Bruce & Co., which is one of the leading seed houses in the vicinity. Two brothers survive him.

CROSSMAN.—Aged 73 years, Chas. W. Crossman died at Rochester, N. Y. He was president of the Crossman Bros. Seed Company of which he had been a member since he was 16 years. His widow and two daughters are left.

HASENWINKLE.—Henry Hasenwinkle died at his home in Bloomington, Ill., on July 14. Mr. Hasenwinkle was president of the Hasenwinkle Grain Company at Bloomington and a member of the Chicago Board of Trade.

HAWK.—Aged 67 years, F. Hawk died, following an operation, on June 9 at his home at Allentown, Pa. He had been in the wholesale feed and grain

business for 25 years. He was a member of the Philadelphia Commercial Exchange. His widow and two daughters survive him.

FENHAGEN.—Aged 74 years, Chas. D. Fenhagen died at Roland Park, Md. He was formerly a prominent grain broker on the Baltimore market and was a member of the Chamber of Commerce there.

MEYER.—C. H. Meyer died on June 11. He was an old member of the St. Louis (Mo.) Board of Trade. For many years he had been engaged in the feed business.

PETERSON.—After a short illness, Victor Peterson died at a Minneapolis hospital. He was president of the Atwater Grain Company of Atwater, Minn. Mr. Peterson had been actively engaged in the grain business for most of his life.

RIEDLING.—Aged 79 years, John Reidling, Sr.,

died on June 22 at Louisville, Ky. He was a prominent feed and grain dealer at one time. He retired from active business 15 years ago.

SCOTT.—On June 8 after an illness of several months John Scott passed away at his home in Montreal, Que. He was well known to the hay trade of Canada and the United States as vice-president and secretary of James Scott & Co., of Montreal. He entered this firm in 1892 and had been actively connected with it up to the time of his death.

WANGENHEIM.—Henry Wangenheim died at Boston, Mass., on June 5. He was a resident of

San Francisco, Calif., and was on a visit to his daughter at the time. He was secretary-treasurer of Hochheimer & Co., a San Francisco grain firm. He was also secretary and managing director of the Merchants Exchange at San Francisco.

STROUD.—Aged 41 years, Wm. T. Stroud died at Roxborough, Pa. He was a prominent feed and flour dealer.

WILLIAMSON.—Aged 83 years, Andrew Williamson died near Pittsburgh, Pa. He was associated, until 1905 when he retired, with the grain firm of A. Williamson & Son. He is survived by his widow, three sons and five daughters.

FIRES—CASUALTIES

Perryville, Mo.—Fire damaged the Schaaf Elevator here some time ago.

Temvik, N. D.—The Farmers Elevator Company's elevator was destroyed by fire.

Oriska, N. D.—The top of Nelson & Schoen's elevator here was blown off during a recent storm.

Watosco (mail Breckenridge) Minn.—During a storm the Southall Elevator at this station was destroyed.

Omaha, Neb.—Fire not long ago burned the grain elevator of the Casco Milling Company. The loss amounted to \$125,000.

Fairview, Okla.—Fire destroyed the John Voorhees Elevator. About 500,000 bushels of wheat were also destroyed. Some insurance was carried on the plant.

Rockton, Ill.—Geo. Atwood's elevator was destroyed by fire. The blaze was started by sparks from a passing locomotive. Damages amounted to \$20,000.

Woodhull (r. f. d. Wahpeton), N. D.—Fire destroyed the grain elevator here together with about 17,000 bushels grain. The origin of the fire is unknown.

Beaver Falls, Pa.—Fire damaged a considerable quantity of hay and grain in the feed store of J. R. Anderson on July 6. Loss is estimated at \$10,000.

Rison, Ark.—Ira E. Moore's feed houses and feed trucks were destroyed by fire. The loss entailed amounted to \$40,000. The plant will be rebuilt immediately.

New Richmond, Wis.—Fire destroyed the elevator here of the Gallagher-Williams Grain Company. Loss amounted to \$25,000; insurance to \$15,000. The elevator will be rebuilt at once.

Glendive, Mont.—A loss of \$25,000 was sustained by the owners of the Occident Elevator Company when the elevator was destroyed by fire. A large part of the loss is covered by insurance.

Osborn, Ind.—The feed and fertilizer plant of the Chicago Feed & Fertilizer, whose offices are located at Chicago, Ill., burned early in July. The fire was of unknown origin, though it is believed to have

been caused by crossed electrical wires. The fertilizer end was completely destroyed. The firm is now formulating plans for rebuilding.

Forsyth, Mont.—Fire originating in some oil tanks spread and destroyed a great number of buildings including a grain elevator in the town. Plans for rebuilding have not been announced.

Severance, Kan.—Fire destroyed on June 30 the Farmers Union Elevator together with 400 sacks flour, 2,500 pounds binding twine and a considerable amount of corn. Origin of the blaze is unknown.

Alexandria, La.—The building operated as a grain elevator by W. R. O'Neal and owned by J. G. Gingras burned. Loss amounted to \$3,500. The fire is believed to have been started by a short circuit.

Northville, S. D.—Fire of unknown origin destroyed the elevator owned by the Van Dusen-Harrington Company of Minneapolis, Minn. About 400 bushels of grain were also destroyed. The total loss amounted to \$6,500.

Utica, Ill.—T. J. Williams' grain elevator was destroyed by fire. The blaze was started by a spark from a passing locomotive. Very little grain was stored in the elevator at the time of the fire. Loss is practically covered by insurance.

Taylor, Texas.—The grain elevator of Womack & Sturgis occupied by the J. Gottlieb Grain Company burned recently. Loss amounted to \$25,000. About 650 bushels of corn were also destroyed by the blaze and loss on this amounted to about \$1,000.

Atlanta, Ga.—Fire damaged to the extent of \$200,000 the grain warehouse of T. H. Brooke & Co. The firm is now occupying temporary headquarters until the damage to its headquarters has been repaired. This will practically involve the rebuilding of the entire building.

Kansas City, Mo.—The Katy Grain Company's elevator here was destroyed by fire on June 10. Loss amounted to \$29,000 on building and machinery and \$20,000 on grain. The loss is covered by insurance. The plant was equipped for grinding mixed feeds and did a general manufacturing and jobbing business in mixed lots of feed.

FIELD SEEDS

SEED AND GRAIN CONDITIONS AT ST. LOUIS

We are between seasons in the seed and grain trade in the vicinity of St. Louis. Bluegrass seed has been harvested and is only a moderate crop of high grade seed. The value may be the same as that of last year. Timothy and red top seed are now in bloom, but a short crop is being advocated, particularly on red top. Supplies of rye are well reduced here and the new crop may commence to move by the first of August. Some new wheat has been received already, it grades number two and it brought an extra high price because of its early arrival. New barley is wanted.—Chas. E. Prunty, St. Louis, Mo., in recent letter.

TREATING SEEDS BY ELECTRICITY

Experiments have been conducted in England for some time in treating seeds by electro-chemical processes. The seeds are first soaked in a solution of sodium nitrate, ammonium sulphate, etc., and are then subjected to a low electric current, 0.5-1.25 amperes; 200 volts, for 3½ to 6 hours, according to whether wheat, barley, or oats are being treated.

The seeds are then dried carefully in a rather low, uniform temperature, the best results having

been obtained in malt kilns. Mechanical drying methods are being studied with hope of better success.

The treated seed germinates more rapidly and gives a better yield. The increased yield at Poole, in bushels, were: Wheat, 6.74-12.33; oats, 5.73, 18.49, 20.06; barley, 16.87. When tested on farms the increased yield was wheat, 5.90 to 8.75; oats, 5.14 to 6.67; and barley, 1.11. Other farmers estimated the increase at about 50 per cent with a better yield of straw.

There are already established or in course of construction 25 plants in the United Kingdom for electro-chemical treatment of seeds.

HEAT TREATMENT AND VITALITY OF SEEDS

J. L. Burgess in the *Journal of the American Society of Agronomy*, recently told of experiments in the treatment of seed by heat. As seed grain like any other is liable to insect infestation, accurate data on heat treatment is of value.

In order to determine the extent to which treating seed by heat for the destruction of insects may influence their vitality the author made a series of experiments at the North Carolina Seed Laboratory. Wheat, oats, rye, maize, soybeans, cowpeas,

etc., were subjected to different degrees of heat during various periods. As a rule, the higher the temperature, the shorter was the time the seed was subjected to it.

Results.—Cowpea seeds were the most sensitive to heat. They were generally killed when exposed to a temperature of 90° Centigrade for a period of five hours, but their germinating capacity did not appear to be affected when they were subjected to a temperature of 60° Centigrade for one hour.

The germinating capacity of soybeans was hardly affected by a treatment at 60 to 90° Centigrade during one, three, or five hours.

When corn was subjected to a temperature of 80° Centigrade during one hour its germinating capacity was reduced to 68 per cent; the same treatment during three hours reduced it to 32 per cent. The germinating capacity of the control seed was 94 per cent.

The germinating capacity of oats did not seem to be affected by different treatment varying from 60° to 90° Centigrade during one, three, or five hours. In this case, however, there appears to have been an experimental error as the germinating capacity of the control seed was shown to be lower than that of the treated seed.

Subjecting rye to a temperature of 80° to 100° Centigrade during five hours had practically no effect on its germinating capacity, but a treatment at 110° during two hours reduced this capacity to 78 per cent, and a treatment at 120° during five hours killed the grain.

High temperatures seriously affected the germinating capacity of wheat. Treatment at 110° for one hour reduced it to 60 per cent and when prolonged during three hours, to 55 per cent. A temperature of 120° during one hour killed the grain. The germinating capacity of the control seed was 92 per cent.

Conclusions.—Soybeans, rye and oats may safely be subjected to high temperatures to destroy insects. According to some workers (Dean, etc.) the lowest temperature used in these experiments is sufficient to destroyed insects. It has, however, not yet determined whether this temperature is high enough to destroyed the eggs of the insects.

NEW SEED GRADES AT CHICAGO

Directors of the Chicago Board of Trade recently put into effect new regulations governing grades and trading in timothy, clover and other field seeds. The regulations define spring contract timothy as seed with a purity of not less than 99.5 per cent and hulled seed not in excess of 35 per cent. A contract car of prime timothy will be 36,000 pounds. The unit of trading, when less than car lots, shall be 50-bag lots on basis of 120 pounds.

The regulations further state that all questions of soundness, purity and hulling shall be determined at and by the seed analyst laboratories of the Board of Trade. Seed laboratories will be established and an analyst in charge will be appointed. Prime timothy shall not contain in excess of 50/100 of 1 per cent inert matter, noxious weed seed and agricultural seed combined. Prime timothy may contain of weeds not noxious 25/100 of 1 per cent. The total content of noxious weeds and weeds not noxious in any sample shall not be in excess of 35/100 of 1 per cent.

A certificate of grade will be issued by the analyst under the supervision and control of the Arbitration Committee on Grass and Field Seeds for each car lot or lot of 50 bags or more. The fees shall be \$2 per car or lot. Split receipts for small lots may be used on surrender and cancellation of original certificates covering a larger lot and on payment of a fee of \$2 for each certificate so issued.

Dockage on country-run shall be allowed for all coarse dirt, as determined by analyst's test, also for fine dirt—usually known as "fine bottom dirt," when in excess of ½ of 1 per cent. The sample, after dockage, shall have a purity of 97½ per cent, but it shall not contain more than 2 per cent of weed seeds. The sample after dockage may contain 2½ per cent of alsike or white or red clover, or in combination 5 per cent of alsike and white and red clover. Country-run timothy shall not be more than 50 per cent hulled. The color shall be fair average for the crop. Nothing in the rules shall compel inspection by the seed analyst laboratories of seed sold strictly by sample under special agreement.

Whether the official analysis of seed in the laboratories of the Board of Trade is unsatisfactory, the party tendering the samples for analysis shall have the right of appeal to the Arbitration Committee on grass and field seeds, demanding change to desired grade, provided the appeal be made within 24 hours after the analyst's report is made. There shall be no additional fee for such appeal if the grade is changed by the committee. The fee for appeal, if grade be sustained, shall be \$5 per car or lot.

In all sales for future delivery of seed on grade, only seed accepted as contract prime or country-run by the analyst shall be deliverable on contract. All contracts for future delivery for the new crop season shall be understood as beginning with the

(Continued on Page 76)



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Best in the Long Run

HAY, STRAW AND FEED

LEGUMINOUS HAY ACREAGE PREDOMINATES

Alfalfa now has an acreage greater than that of any other legume or grass cut for hay, not growing in combination with another. Of the total tame hay acreage in 1919, alfalfa occupied 21.1 per cent, timothy and clover mixed 18.2 per cent, timothy 15.9 per cent, clover 12.3 per cent, pea 8.7 per cent, grain cut green 7.7 per cent, and all others 16.1 per cent. If the acreage of the timothy and clover mixture is equally divided between those two plants, the timothy acreage becomes 25 per cent of the total of tame hay acreage, and clover 21.4 per cent, so that timothy is still the leading hay plant and the clovers have second place, a little above alfalfa.

The leguminous plants, alfalfa, clover, one-half of clover and timothy, and pea are 51.2 per cent of the tame hay area, and it is a significant fact that more than one-half of the tame hay acreage is now devoted to plants of the nutritive and soil improving properties of the legumes, whereas, 10 years ago, as the census testifies, hardly one-third of the tame hay area was leguminous. This comparison has been established by the Bureau of Crop Estimates.

THIRTEEN YEARS OF PROGRESS

The Denver Alfalfa Milling & Products Company, with headquarters in Lamar, Colo., recently celebrated its thirteenth birthday. This company was organized in April, 1908, by Floyd T. Wilson. At that time the alfalfa milling industry was practically unknown in the great feeding centers of the East and South. Mr. Wilson figured by tapping the rich irrigated alfalfa fields of Colorado, they could furnish the trade with alfalfa meal of good green color, high in protein and ground to a uniform fineness.

The company's first mill was built at Hartman, Colo., which was the headquarters of the Denver Alfalfa Milling Company for 10 years. The little town of Hartman, with a population of a hundred people, is located 10 miles off the main line of the Santa Fe, and it was here that the big things later accomplished by this Colorado organization, had their inception. Mr. Wilson is a great believer in the saying of John R. Paxton: "Let a man make a better mouse-trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door." The Denver company "built their house in the woods," and it was not many years before the meal buyers of the world were finding the path that led to the little western town of Hartman.

Other mills were built at Wiley and Bristol, Colo., within a year, and in 1913 a consolidation was effected whereby two more mills, at McClave and Kornman, Colo., were added to the string.

Today the Denver company owns and controls 12 big mills, one of which is in Abilene, Kan., two in the Pecos Valley, New Mexico, and the remaining nine in southeastern and northern Colorado. Personal acquaintance with the trade and a consistent appreciation of the other fellow's viewpoint have been important factors in the building up of this big meal business. This idea is possibly better exemplified by a little card which

the management sent to the trade several years ago, reading: "Get acquainted with your neighbor, you might like him."

In the publication of "Mealology," which is the house organ of the Denver Alfalfa Milling & Products Company, the merits of alfalfa meal are at all times strongly advocated, and through this little house organ the company keeps in personal touch with the leading meal buyers of the East and South. Several years ago Mr. Wilson inaugurated what is known as the exchange wagon system in the



THE MILL AT HAGERMAN, N. MEX.

operation of alfalfa mills, allowing the farmer to haul a load of hay into the mill yard, and instead of reloading, to return home with an empty wagon furnished by the company. This system is now in vogue in practically all the alfalfa mills in the West and has resulted in the saving of thousands of dollars in the handling of alfalfa hay. The



MILL OF DENVER ALFALFA MILLING & PRODUCE COMPANY AT BRISTOL, COLO.

company has patents on their own grinding machinery and the machines in use in each of their mills are manufactured under their supervision.

This year the Denver company's properties will market over 100,000 tons of meal, and their trade mark, "Cologreen Meal" with "no sticks, no stems," is well and favorably known to the trade.

Mr. Wilson still has visions of greater things for the Denver Alfalfa Milling & Products Company and he believes that vision is a necessary ad-

junct to big business, but states there is a clear and well defined difference between a man with a vision and a visionary man.

NEW YORK HAY FLUCTUATES

BY C. K. TRAFTON

During the early part of the month under review an easier feeling prevailed in the New York hay market. For the time being supplies were somewhat in excess of the demand, and hence it was quite natural that the majority of buyers should hold off, hoping that prices would drop to still lower levels. Momentarily practically all buyers, and possibly a few receivers, were influenced by a lot of vague talk in circulation respecting the prospective larger supply of cars and the brighter outlook for more liberal shipments from the interior. In the judgment of many sagacious and experienced members of the trade, this was another case of the wish being father to the thought. The weather in the interior was generally considered favorable, being cool temporarily with ample rainfall, and hence it was said that meadows had a fine appearance.

As a result markets were largely influenced by the growth and spread of bearish sentiment. Naturally such sentiment appeared to the great majority as highly seasonable, and therefore reasonable. It was, in short, argued that all signs pointed to a good crop and it was therefore contended that farmers and shippers would begin to offer hay more freely for subsequent delivery at lower figures. In the opinion of many, and especially careless thinkers, this had a plausible sound, but unfortunately there were numerous formidable obstacles which had to be overcome.

Unquestionably the most important of these was the fact that it still continued extremely difficult to obtain anything like a liberal supply of cars. As frequently pointed out in these reviews, there has been a lot of vague and misleading gossip circulated respecting a bright outlook for more cars, which was largely without valid foundation and sent out for the obvious purpose of influencing the market.

Afterwards there was a sudden and radical change in the temper of the market, weakness being followed by buoyancy. Offering suddenly became decidedly lighter and with demand more active all of the early decline was soon recovered. It was plainly evident that the buying element had become too confident as a result of the forecast of

larger receipts, and hence had remained out of the market too long and had permitted their stocks to run down to a low plane. Consequently when they came into replenish they found the offerings far too meager, and therefore they were compelled to advance bids sharply, and especially on the good grades, which were especially scarce. As a matter of fact, almost all of the hay arriving, especially by river boats, has been of common or inferior quality, and therefore the price differ-



A COLORADO ALFALFA FIELD AFTER THE FIRST CUTTING

July 15, 1920

ence between poor and choice descriptions has become wider.

Advices from the interior were somewhat disappointing, as they showed that the movement has not been up to expectations. Apparently farmers have been making comparatively light deliveries, owing partly to the scarcity and high cost of labor. Furthermore, notices of invoices from the interior have been below estimates, owing partly to the difficulty experienced in obtaining cars or permits. Consequently those receivers or distributors who had permitted their stocks to run down low were compelled to raise their bids slightly in order to secure choice timothy or choice light clover mixed.

NEW FEED BRANDS

"WIRTHMORE" wheat feed and hominy meal. St. Albans Grain Company, St. Albans, Vt. Filed April 5, 1920. Serial No. 130,693. Published June 15, 1920. See cut.

"ALCOMO" feed for livestock and poultry. Burley Feed Manufacturing Company, Burley, Idaho. Filed April 16, 1920. Serial No. 131,203. Published June 15, 1920. See cut.

"BUTTER FAT" dairy feed. Monarch Mills, Inc., Chattanooga, Tenn. Filed April 26, 1919. Serial No. 117,886. Published May 25, 1920. See cut.

"GRAINOLA" stock feed. Ralston Purina Company, St. Louis, Mo. Filed February 19, 1920. Serial No. 128,617. Published June 29, 1920. See cut.

"BIG FLOW" dairy feed. W. M. Cosby Flour & Grain Company, Birmingham, Ala. Filed February 20, 1920. Serial No. 128,663. Published June 29, 1920. See cut.

"BROOKS' BEST" poultry feed for egg production. The Brooks Company, Fort Scott, Kan. Filed October 2, 1919. Serial No. 123,330. Published June 29, 1920. See cut.

"GUMBO HORSE AND MULE FEED," dairy, stock, cattle and farm animal food. The Buckeye Cotton Oil Company, Cincinnati, Ohio. Filed May

11, 1920. Serial No. 132,289. Published June 15, 1920. See cut.

"ALFOGREEN" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,222. Published June 15, 1920. See cut.

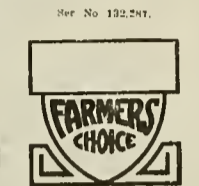
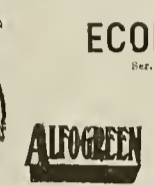
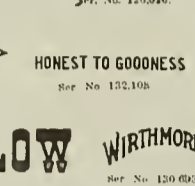
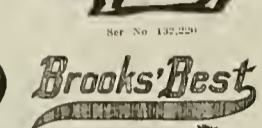
"ALFOSWEET" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,221. Published June 15, 1920. See cut.

land, Ohio. Filed February 19, 1920. Serial No. 126,613. Published June 29, 1920. See cut.

"HONEST TO GOODNESS" stock feed. Northern Illinois Cereal Company, Chicago, Ill. Filed May 6, 1920. Serial No. 132,108. Published June 15, 1920. See cut.

"BUCKEYE POULTRY FEED" poultry food. The Buckeye Cotton Oil Company, Cincinnati, Ohio.

GRAINOLA
Ser. No. 128,617.
BUTTER FAT



"BUTTER BALL" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,226. Published June 15, 1920. See cut.

"BON-TON" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,225. Published June 15, 1920. See cut.

"WISHBONE" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,224. Published June 15, 1920. See cut.

"GREEN SEAL," a dairy, stock, cattle, farm animal and poultry feed. The Buckeye Cotton Oil Company, Cincinnati, Ohio. Filed May 11, 1920. Serial No. 132,288. Published June 15, 1920. See cut.

"M. I. M. POULTRY FEED" a poultry food. The Buckeye Cotton Oil Company, Cincinnati, Ohio. Filed May 11, 1920. Serial No. 132,291. Published June 15, 1920. See cut.

"FABER'S TANKAGE HOG FATTENER," stock food. Faber & Co., Peoria, Ill. Filed December 15, 1919. Serial No. 126,016. Published June 15, 1920. See cut.

"ECONOMY" poultry and stock feed including mixed grain known as scratch or scratching feed for poultry, meat scraps for poultry, ground mixed grain known as mash feed for poultry, digester tankage, horse feed, chop feed, hog feed and dairy feed. The Nickel Plate Elevator Company, Cleve-

land, Ohio. Filed May 11, 1920. Serial No. 132,287. Published June 29, 1920. See cut.

A food for calves. Martin Calf Feed Company, Mineral Point, Wis. Filed June 3, 1920. Serial No. 133,223. Published June 29, 1920. See cut.

"HOG LASSES" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,220. Published June 29, 1920. See cut.

"ALFA-OATS" stock feed. Alfocorn Milling Company, St. Louis, Mo. Filed May 10, 1920. Serial No. 132,227. Published June 29, 1920. See cut.

"FARMERS' CHOICE" mixed feeds for horses, cattle, hogs, dairy cows and poultry. Donmeyer, Gardner Company, Peoria, Ill. Filed March 10, 1920. Serial No. 129,490. Published June 1, 1920. See cut.

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HESS WARMING & VENTILATING CO.

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Did You Get One of Our FREE STROKERS, Showing All the Grain Grades?

FIELD SEEDS

(Continued from Page 72)

month of August of each year, and shall terminate with the month of July of the following year. The certificate shall hold good for delivery for the crop year August 1 to July 31 of the year following, and a certificate issued during one crop year shall not be available for delivery after the end of that crop year unless on sale specifying old crop seed, provided in all cases the identity of the seed so passed shall be preserved and provided the seed be in good condition when delivery is made. The bags containing the contract prime seed so inspected shall be marked at seller's expense before delivery on contract, to conform to the identification number or mark on the certificate of analysis.

In all sales of clover, millet and other grass and field seeds for future delivery or by sample to arrive, a carload shall be deemed to contain 36,000 pounds, the same as in timothy. All sales of seed by sample or on grade, car lots or less than car lots, shall be "delivered."

On sales of a specified number of bags of clover or alsike seed, delivery shall be made on the basis of 150 pounds per bag, but delivery may vary within



PLACING THE SEED IN A CYLINDER

reasonable limits as to number of bags used to contain the amount of seed contracted for. It is provided that no lot of seed shall be deemed regular for delivery if there is an excess or deficit in weight of more than 2 per cent over or under the amount called for in the contract. Any excess or deficit within the above limits shall be settled for at the

EXPERIENCES IN HOT WATER TREATMENT OF SEED WHEAT TO PREVENT LOOSE SMUT

BY RUSSELL G. EAST*

Since this is the second time I have appeared before you to talk about our method of smut control, I take it that you only care for a report on this season's results.

However, in order that you may have your minds refreshed on what led up to the present results, I



DIPPING THE CYLINDER IN A HOT WATER TANK

will very briefly give you a little of the history connected with the smut control work which has been developed in Shelby County.

The smut that I refer to is that which is sometimes called "Black Heads" and is only seen at its best when wheat is in full bloom or until a rain comes along and washes the smut away, leaving a bare stem where there should be a head of wheat.

Because these smut spores are blown into the heads of sound wheat and there find their way into the kernel as it is forming, we cannot control this with the Formalin treatment.

A Norwegian, some 32 years ago, found that by soaking wheat in cold water for four or five hours and then immersing the wheat in water at a temperature of 29 degrees, the smut spores inside the kernel would be killed without injury to the wheat.

This method has been used successfully in an experimental way ever since. It remained, however, for the farmers of Shelby County, Ind., to develop a machine which would make this method of treating wheat practical.

In 1918, following a successful demonstration on the farm of Pohn Meiks near Shelbyville, the farmers saw the value of the work when they found an average of 22 per cent of loose smut in the untreated wheat and none in the treated from the same bin. This led to their having a machine made that would treat wheat in larger quantities.

Of the 30 plots sown with treated seed in 1918, only a very few showed any trace of smut, while the average of all untreated wheat in the same fields was 11.1 per cent. The fact that this indicated a loss in Shelby County of more than \$200,000 which could have been prevented, gave impetus to the movement for disease free seed wheat.

Nine similar plants were put in operation over the state in 1919. The plant in Shelby County was enlarged to a capacity of 100 bushels per day. A drum, 4 feet long by 24 inches in diameter, which is covered with a heavy screen wire, is the machine in which the wheat is immersed in the hot bath, after it has been presoaked in the cold water. It stays in this hot bath, at a temperature of 129 degrees, for 10 minutes after which it is spread on the floor for a few minutes to cool.

*An address delivered before the recent Indiana Grain Dealers Convention.

The wheat is then taken to the farmer's home and scattered very thinly over a floor to dry or it can be sown immediately.

We have learned considerable about the seeding proposition this past season. Ninety-three of our farmers had wheat treated and all of them made a report as to how their drill was set and what trouble was experienced, if any. It was found that the treated wheat was 50 per cent larger than before treating, so that wherever one bushel of dry wheat was wanted the farmers learned to put one and one-half bushels of treated wheat.

The results of this year's work show that it is reasonable to expect just as good results the first year from treated wheat, give it anywhere near an equal chance in stand of crop, and the treated wheat is the better. This matter of seeding has done much to prove the value of the work.

Of the farmers reporting on spring condition of treated wheat, we found 13 reports showed not as good as untreated, 7 reported better than untreated and the rest were said to be equal. Of those reporting not as good, they were all sown earlier than other wheat and damaged by Hessian fly. Of those reporting "equal" several later reported the treated wheat as coming along with greater vitality.

This increased vitality has been marked in the



EMPTYING CYLINDER AFTER TREATMENT

seed used from the first year's demonstration. We are now firmly convinced that this method not only eradicates smut but also a number of minor diseases which tend to weaken the wheat plant.

NEW YORK SEED MARKET DULL

BY C. K. TRAFTON

As usual during mid-summer, the New York market for field seeds has been extremely quiet much of the time during the month under review. In fact, some traders of long experience assert that the dullness has been even more pronounced than usual for this season. However, prices have shown no alteration of moment, although red clover is perhaps a shade easier, while alsike is quoted about a cent lower and crimson clover roughly a half cent lower.

As far as actual business was concerned, about the only feature of importance was the fairly large movement in crimson clover early in the month.

(Continued on Page 80)

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FIELD SEED NOTES

A seed business has been started at Evansville, Ind., by Guy M. Purcell under the name of the Purcell Seed Company. Mr. Purcell was formerly general manager of W. H. Small & Co.

The seed and feed business at Gonzales, Texas, has been sold by W. H. Ainsworth & Sons to W. C. Kleine. The business is located in the Farmers Union Warehouse.

A. R. Bruns is president and general manager; C. J. Lambert, first vice-president; Alfred L. Bruns, second vice-president and Oscar G. Sappington, secretary and J. G. Ballinsky, treasurer of the

Bruns Seed Company of Washington, Iowa. Its capital stock is \$100,000.

A seed warehouse costing \$8,000 is to be erected at Hagersville, Ont., by the Canadian Seed Company of Toronto.

Arrangements have been agreed upon for the consolidation and merger of The Albert Dickinson Company and the Continental Seed Company of

Chicago, Ill. This will be carried into effect as soon as practicable. The Dickinson firm, which is the oldest seed company in the country, was established in 1855 by A. F. Dickinson. Albert Dickinson, his son, assumed control in 1868 and the business was incorporated in 1890. The Continental Seed Company was launched last October by former employees of the Dickinson concern.

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SEEDS

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The Albert Dickinson Co.
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[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

ELEVATORS AND MILLS**OHIO ELEVATOR FOR SALE**

Good town with good schools and churches. Finest farming community. No competition. Electric power. Good reasons for selling. OHIO, Box 4, care "American Elevator and Grain Trade," Chicago, Ill.

FOR SALE

Grain and feed elevator with electric attrition feed mill. No competition. Located in good grain territory; good dairy and feed business. Plenty of grinding with good retail trade. C. A. FENSTERMAKER, Amboy, Ill.

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Well equipped 100-barrel mill in Rocky Mountain territory, with advantage of natural gas for fuel. Present owners retiring account poor health and other interests. ROCKY MOUNTAIN, Box 6, care "American Elevator and Grain Trade," Chicago, Ill.

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The smoothest running 50-barrel flour and feed mill in the state of Ohio. Only mill in thriving town of 8,000. Plenty of wheat the year around at mill door. Cheap electric power. Best of reasons for selling. Inquire M. M. N., Box 7, care "American Elevator and Grain Trade," Chicago, Ill.

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One 75-horsepower Brownell Boiler. One 55-horsepower Buckeye Engine. Splendid shape. ANNESSER MILL COMPANY, Columbus Grove, Ohio.

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50 other sizes.
A. H. McDONALD, 550 W. Monroe St., Chicago, Ill.

**Miscellaneous
Notices**

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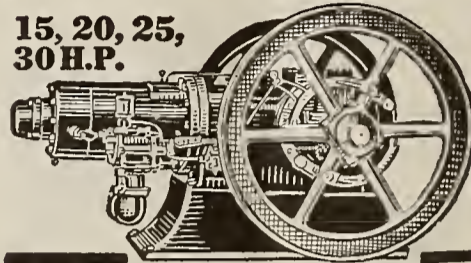
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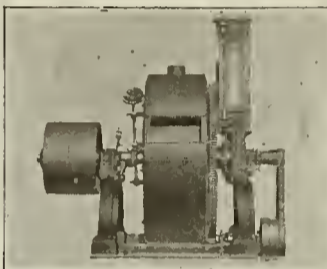
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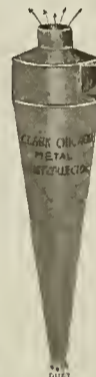
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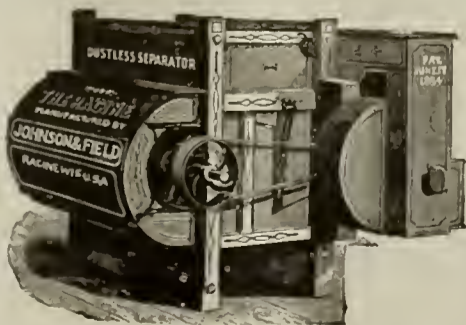
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FIELD SEEDS

(Continued from Page 76)

This was traceable almost entirely to the complete failure of the crop in Tennessee, which caused a big demand from that state and from Kentucky, where dealers heretofore had been waiting for definite news regarding the outcome of the domestic crop before buying. According to the best-informed local importers, the new crop in France looks well, although many large French dealers state that the seed will not be as good as last year's in color. A few lots were sold on speculation at 9 cents per pound c. i. f. New York, but as the threshing season draws near Paris dealers are inclined to reduce their prices slightly. Still, it is considered unreasonable to assume that much of this seed will reach these shores in time for fall sowing. The season was very late last year, and this year it is alleged to be at least two weeks later than usual. Supplies here are fairly liberal and are quoted in a large jobbing way at 9 cents.

Red clover is virtually unchanged, although slight shading is noted in some quarters. The failure of prices to break more sharply on such a dull market, and taking into account the large carry-over, estimated by conservative authorities at 20,000,000 pounds, is ascribed to the fact that many dealers who had paid too much for their stock are not willing to take losses at present figures, but prefer to hold their seed on speculation. In their judgment, they may be able to get better prices if they wait until August, when buying for fall sowing begins.

For the first time since the war started samples of red clover have been received from Hungary and Roumania, formerly large sources of supply. They

are generally described as decidedly poor, requiring a great deal of cleaning. Many of them contain large dodder, which cannot possibly be extracted, and it is estimated by experienced handlers that the cleaning necessary before the seed could pass the purity tests would entail a loss of fully 20 cent. Largely for this reason little business has been done. Prices named average around 34 to 36 cents per pound f. o. b. Hamburg, payment before shipment. This last provision, it is stated, is made necessary by the great difficulty of negotiating documents in Germany.

There are offerings of 1919 French red clover in this market at about 38 to 39 cents per pound and it is said that about 1,000 bags are still available for shipment. However, in view of the large carry-over here, as mentioned above, there is no incentive to contract for further importations. Timothy is not quotably changed, but the undertone is stronger, owing to predictions that the new crop will not be abundant, owing to adverse weather conditions in the growing sections.

Danish orchard grass of good quality is offered for August-September shipments at 26 cents f. o. b. Copenhagen. Owing to its bulk, the freight on this seed is considerable and therefore it is indicated that if any is imported the prices will have to be about 28 or 29 cents c. i. f. New York. Still, it is not thought likely that much business will be done, as there is considerable carry-over of orchard grass in this country which may prove to be sufficient to take care of our requirements.

Sunflower seed has been extremely quiet, buyers being indifferent owing to continued liberal importations, especially early in the month. Several large cargoes arrived from Argentina, aggregating about 4,735 bags. This made the total arrivals within the past two months about 17,125 bags.

Arrivals of crimson clover were larger, about 1,600

bags for the month against about 550 during May. Other arrivals were: 425 bags of rye grass and about 290 bags of vetches; also 1,700 bags of canary seed from Argentina. Exports of 250 bags of grass seed to London were reported.

Nungesser, Dickinson & Co., New York seed merchants, write as follows: "With the exception of alsike and crimson clover, which are slightly lower, there is little change in prices. Trade is unusually quiet. According to reports from the growing sections, the outlook for the crops is favorable up to this time."

A Paris seed house wrote as follows: "Prospect for crop of red clover is very good at present time. If weather remains favorable it is certain we will have a very good crop, but must wait until the end of August to have a reliable opinion. Our stocks of red clover are very small indeed. This year we will have to compete with Italy as usual, and also with the Central Powers in red clover export. France is a large exporter of red clover, perhaps the largest in Europe when our crop is a normal one, and there is no reason, if our crop is sufficient as expected, why we should not export very freely during the coming season, but as stocks are small prices may not be very much reduced unless the Central Powers should have large stocks still in hand. We import our timothy needs from your country and Canada and only to a small extent, but it is very likely that this year we will want a larger quantity of this commodity, owing to the fact that our farmers are planting more meadows for cattle breeding. Crimson clover season is beginning and we are very much disappointed in not receiving orders from your side."

The American Seed Company's plant at Richmond, Ind., has been purchased by the International Harvester Company.

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Moore-Lawless Grain Co., grain receivers.*
Moore-Seaver Grain Co., corn and oats.*
Peppard Seed Co., J. G., alfalfa seed, millet.
Thresher Fuller Grain Co., commission.*
Watkins Grain Co., consignments.*
Western Grain Co., shippers grain and feed.*

LANCASTER, PA.

Eby & Sons, Jonas F., receivers and shippers.*†

LANSING, MICH.

Wickens Grain Co., Inc., buyers and shippers.*

LIMA, OHIO.

Hurley Buchholtz Co., wholesale grain, hay, straw.*†

LOUISVILLE, KY.

Edinger & Co., grain, hay, feed.*†
Farmer & Sons, Oscar, grain, hay, feed.*†

LITTLE ROCK, ARK.

Wilson Co., Jno. R., corn, oats, mill feeds.

LYNCHBURG, VA.

Moon-Taylor Co., grain, feed and hay brokers.*†

MACON, GA.

McRae, Duncan L., flour, grain, provisions.*

MEMPHIS, TENN.

Browne, Walter M., grain, hay, mill feed.*
Jones, Lee D., grain dealers.*
National Brokerage Co., brokerage and consignments.*†
U. S. Feed Co., receivers and shippers.*†

MIDDLEPOINT, OHIO

Pollock Grain Co., wholesale grain, hay.*

MILWAUKEE, WIS.

Bacon Co., E. P., grain commission.*
Courteen Seed Co., seeds.
Donahue-Stratton Co., buyers and shippers.*
Flanley Grain Co., grain.
Franke Grain Co., receivers and shippers.*
Kamm Co., P. C., grain merchants.*
Kellogg Seed Co., seeds.
Mohr-Holstein Commission Co., grain com.*
Taylor & Bournique Co., corn, oats, barley.*

MINNEAPOLIS, MINN.

Cereal Grading Co., grain merchants.*
Godfrey Grain Co., grain commission.*
McCaull-Dinsmore Co., com. merchants.*
Quinn, Shepherdson Co., grain merchants.*
Scroggins Grain Co., The, wheat shippers.*

MONTGOMERY, ALA.

Alabama Black Belt Co., grain brokers and dealers
Alabama products.*
Smith Brokerage Co., grain, mixed feeds, flour, hay, mill feeds.

†Members National Hay Association.

MOBILE, ALA.

Hopper & Co., H. M., grain, millfeeds, hay brokers.*

NEW YORK, N. Y.

Barry, J. A., salvage grain.*
Brainard Commission Co., oats, barley.*
Forbell & Co., L. W., com. merchants.*
Nungesser-Dickinson Seed Co., seeds.
Power & Co., W. D., hay, straw, produce.*†
Radwaner Seed Co., I. L., seeds.

NORFOLK, VA.

Moon-Taylor Co., grain, feed and hay brokers.*†

PEORIA, ILL.

Bowman & Co., Geo. L., grain commission.
Cole Grain Co., Geo. W., grain receivers.*
Conover Grain Co., E. B., receivers, shippers.
Dewey & Sons, W. W., grain commission.*
Luke Grain Co., grain commission.*
Miles, P. B. & C. C., grain commission.*†
Mueller Grain Co., receivers and shippers.*
Turner-Hudnut Co., grain commission.*
Warren Commission Co., consignments.*

PHILADELPHIA, PA.

Delp Grain Co., E. E., grain commission.*
Lemont & Son, E. K., wheat, corn, oats, feed.*†
Miller & Sons, L. F., receivers and shippers.*†
Richardson Bros., grain, flour, mill feeds.*
Rogers & Co., E. L., receivers and shippers.*†
Young & Co., S. H., grain, flour and feeds.

PITTSBURGH, PA.

Foster Co., C. A., wholesale grain, hay.*†
Harper Grain Co., grain commission.
Heck & Co., W. F., grain, hay, mill feeds.*†
Herb Bros. & Martin, grain and hay.*†
McCague, R. S., grain and hay.*†
Rogers & Co., Geo. E., receivers & shippers.*†

RICHMOND, VA.

Beveridge & Co., S. T., grain, hay, feed.*†
Moon-Taylor Co., grain, feed and hay brokers.*†
Southern Brokerage Co., hay, grain, feed.*

SIOUX CITY, IOWA

Acme Hay and Mill-Feed Co., mill feeds, tankage.*†

ST. LOUIS, MO.

Elmore-Schultz Grain Co., receivers, shippers.*†
Goffe & Carkener Co., grain, hay, seeds.*†
Graham & Martin Grain Co., rec. exclusively.*†
Langenberg Bros. Grain Co., grain com.*†
Marshall Hall Grain Co., receivers, shippers and exporters.*
Mullally Hay & Grain Co.*†
Nanson Commission Co., receivers, shippers.*†
Picker & Beardsley Com. Co., grain, hay.*†
Powell & O'Rourke Grain Co., receivers, shippers, exporters.*
Prunty, Chas. E., grain and seeds.*
Schisler Seed Co., A. W., field and garden seeds.
Schultz & Niemeier Com. Co., receivers and shippers.*
Seele Bros. Grain Co., commission.*
Toberman, Mackey & Co., grain, hay, seeds.*†
Turner Grain Co., grain commission.*

SIDNEY, OHIO.

Custenborder & Co., E. T., buyers and shippers of grain in car lots.*
Wells Co., J. E., wholesale grain, seed.*

SPRINGFIELD, ILL.

Lloyd & Co., John H., grain merchants.*

TERRE HAUTE, IND.

Kuhn & Co., Paul, receivers and shippers.

TIFFIN, OHIO.

Sneath-Cunningham Co., grain and seeds.

TOLEDO, OHIO.

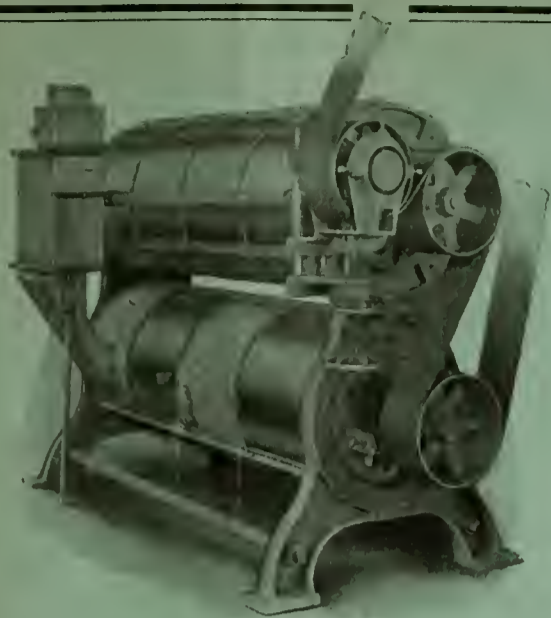
De Vore & Co., H. W., grain, seeds.*
King & Co., C. A., grain and seeds.*†
Raddatz & Co., H. D., grain, seeds.*
Rice Grain Co., receivers and shippers.*
Southworth & Co., grain and seeds.*†
Wickenhiser & Co., John, grain dealers.*
Zahm & Co., J. F., grain and seeds.*†

TOPEKA, KAN.

Derby Grain Co., wheat, oats, corn.*
Golden Belt Grain & Elevator Co., grain.*

WINCHESTER, IND.

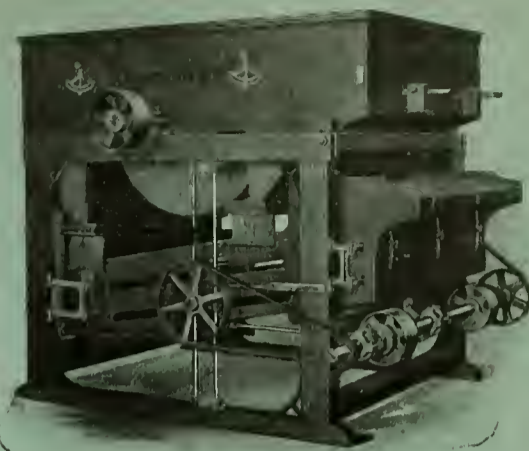
Goodrich Bros., wholesale grain, seeds, hay.*†



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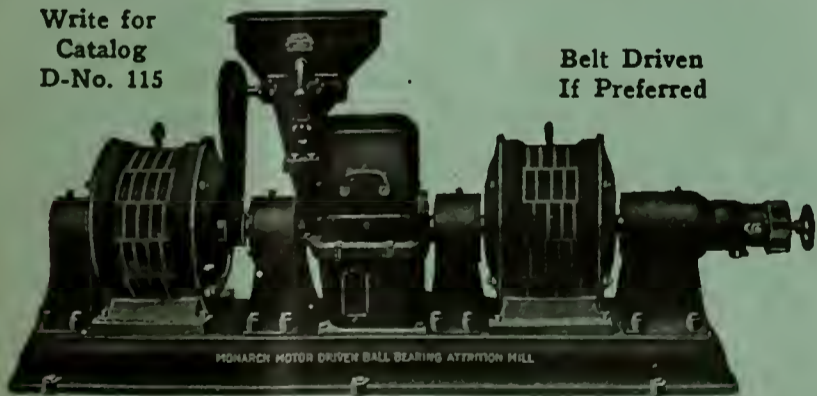
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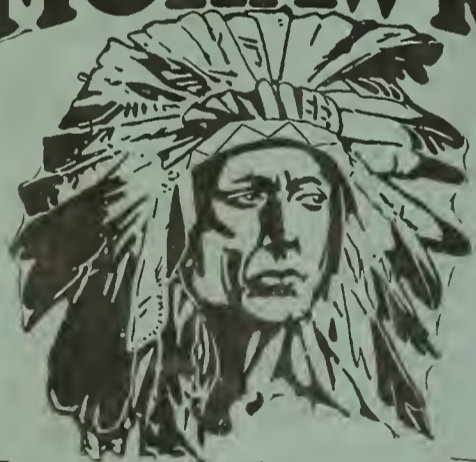
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